

8mm VIDEO CAMCORDER

Instruction Manual

Introduction

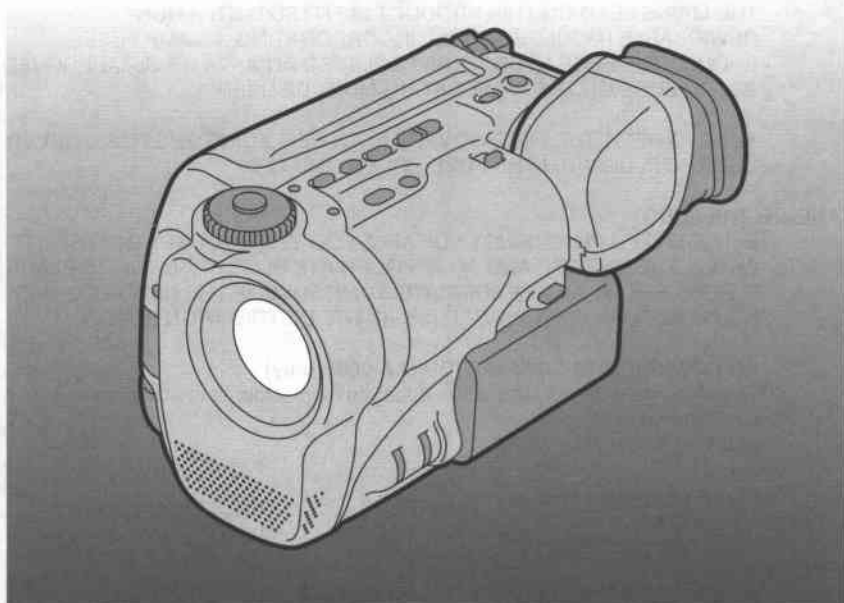
Basic
Operation

Advanced
Functions

Editing

Eye Control

Additional
Information



Canon

Hi8

UC-X30^{Hi}

P (PAL)

Important Usage Instructions

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Introduction

CAUTION:



TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

WARNING:



TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS PRODUCT TO RAIN OR MOISTURE.

CAUTION:

TO REDUCE THE RISK OF ELECTRIC SHOCK AND TO REDUCE ANNOYING INTERFERENCE, USE THE RECOMMENDED ACCESSORIES ONLY.

CAUTION:

CUSTOMERS IN THE U.K. SHOULD READ THIS BEFORE USING THIS PRODUCT.

CHANGING THE FUSE

THE MAINS LEAD ON THIS PRODUCT IS FITTED WITH A NON-REWIREDABLE (MOULDED) PLUG, INCORPORATING A 3 AMP FUSE. SHOULD THE FUSE NEED TO BE REPLACED AN *ASTA* OR *BSI* APPROVED BS1632 FUSE OF THE SAME RATING MUST BE USED.

ALWAYS REFIT THE FUSE COVER AFTER REPLACING THE FUSE. NEVER USE THE PLUG WITH THE FUSE COVER OMITTED.

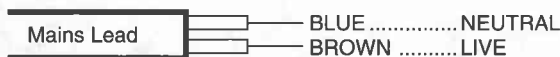
CHANGING THE PLUG

IF THE FITTED PLUG IS NOT SUITABLE FOR YOUR SOCKET OUTLETS, IT SHOULD BE CUT OFF AND AN APPROPRIATE PLUG FITTED IN ITS PLACE. IF POSSIBLE FIT AN APPROPRIATE 3 AMP FUSE. IF THE NEW PLUG HAS NO FUSE, THEN FIT A 5 AMP FUSE AT THE DISTRIBUTION BOARD.

AC POWER CORD CONNECTION (CA-900B only)

The wires in the mains lead of this apparatus are coloured in accordance with the following cord.

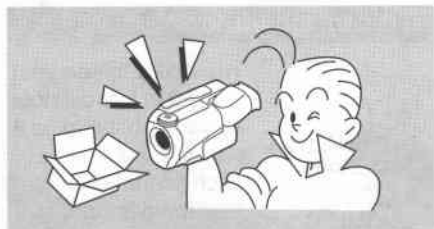
(IMPORTANT)



As the colours of the wires in the mains lead may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows: The wire which is coloured BLUE must be connected to the terminal which is marked with the letter N or coloured black. The wire which is coloured BROWN must be connected to the terminal which is marked with the letter L or coloured red. Neither Blue wire or Brown wire is to be connected to the Earth pin of a 3 pin plug.

THE SEVERED PLUG MUST BE DESTROYED IMMEDIATELY TO AVOID ANY POSSIBLE ELECTRIC SHOCK HAZARD.

Thank you for choosing a Canon

E

First, we'd like to thank you for purchasing this Canon camcorder. Its advanced technology makes it very easy to use — you will soon be making high-quality videos which will give you pleasure for years to come.

To get the most out of your new camcorder, you should read this manual thoroughly — there are many sophisticated features which will add to your recording enjoyment.

Getting started

To get started, you will need to read these sections:

“Basic Recording”

“Power Sources”

“Cassettes”


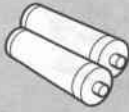


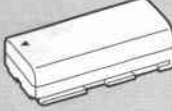


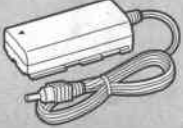
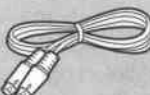
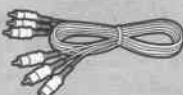

“Preparing the Camera”

Then you can go on to find out about the more advanced features.

Using this manual

As well as using the table of contents and the alphabetical index, you can look up the different parts and functions in the sections called “Nomenclature” and “Viewfinder Displays.” There's also a “Troubleshooting” section in case you run into any problems.

Check that this package contains the following accessories:

WL-65 Wireless Controller 	Two AA batteries 
SS-200 Shoulder Strap 	Lens cap and lens cap cord 
BP-911 Battery Pack 	CA-900 Compact Power Adapter 
Lithium button battery 	DC-900 DC Coupler 
S-150 S-video Cable 	STV-150 Stereo Video Cable 
PC-A10 SCART-Adapter (Europe, Asia) 	

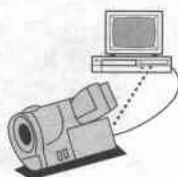
Introducing the UC-X30Hi

E

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Introduction

Auto Editing Function



A complete set of editing functions is built-in, with RC Time Code for accurate frame-by-frame editing.

Eye Control



Control focus and other functions without lifting a finger. The UC-X30Hi knows what you are looking at, and how best to record it.

Optical Image Stabilizer



Optical technology stabilizes your recordings even at the furthest reaches of the zoom range.

20× lens and 40× digital zoom



From wide-angle to world-beating 20× telephoto — with unparalleled optical quality. The digital zoom doubles this magnification for even more dramatic results.

Hi8



Hi8 is the format that video professionals choose when they want high quality, long recording times and compact size.

Colour viewfinder



The ability to see your subject in living colour as you shoot makes it easier to compose each scene for maximum impact.

Digital effects and faders



Advanced digital technology allows you to add special effects and varied scene transitions to your recordings.

Hi-fi stereo sound



The compact integral microphone offers the depth and realism of AFM in full dynamic stereo.

Lithium ion power supply



The UC-X30Hi features the latest in portable power technology.

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Editing

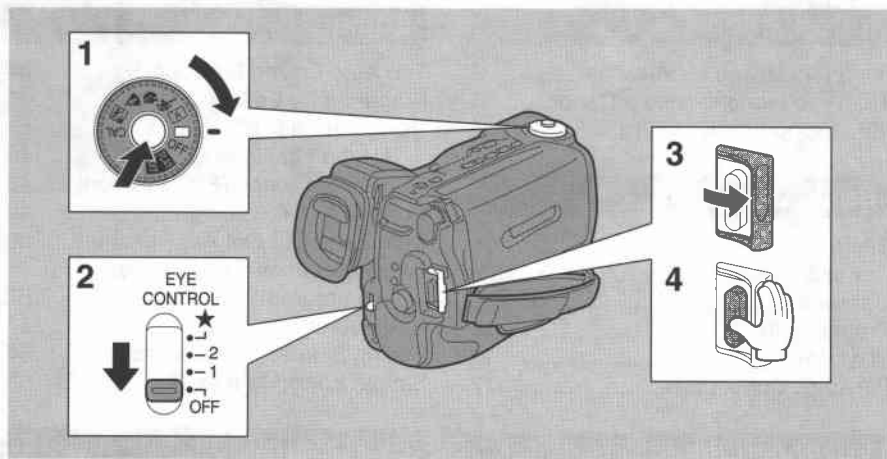
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Before you start recording

Complete the following steps:

- Attach a power source (p. 8).
- Load a cassette (p. 12).
- Adjust the viewfinder, fasten the grip belt and take off the lens cap (p. 13).

You may also want to install the backup battery (p. 11) in order to set the date and time display (p. 24).

To record

1. Turn the program selector to the ☐ position.

- This selects the camera's Easy Recording program. It allows you to simply point and shoot without making any manual adjustments (see p. 31).

2. Set the EYE CONTROL switch to OFF.

3. Open the STANDBY cover.

- The operation indicator lights up and PAUSE appears in the viewfinder — the camera is now in "record pause mode."
- The camera will turn itself off if you leave it in record pause mode for more than about five minutes. To return to record pause mode, close and reopen the STANDBY cover, or set the program selector to OFF and then back to CAMERA.

4. Press the start/stop button to begin recording.

- The tally lamp flashes rapidly and REC appears in the viewfinder.

Notes:

- To check that the camera is recording correctly, be sure to make a test recording first.
- Before making important recordings, clean the video heads using a Canon CC-8 Video Head Cleaning Cassette or a commercially available dry-type head cleaning cassette.

5. Press the start/stop button again to pause recording.

- The camera returns to record pause mode and PAUSE reappears in the viewfinder.
- You can stop and restart recording as often as you like by pressing the start/stop button.

6. Close the STANDBY cover.

- As long as the program selector is set to one of the camera's six recording programs, you can use the STANDBY cover to turn the camera on and off. This makes it easy to save battery power, and prevents accidental operation of the start/stop button.

When you have finished recording

- Replace the lens cap.
- Unload the cassette.
- Set the program selector to OFF.
- Disconnect the power source.

Note:

- If you turn the camera off using the STANDBY cover, it will remember your chosen focus and shutter speed settings (and whether or not a title, the date and time were displayed). If you turn it off using the program selector, these settings are erased from the memory.

Before operating your camera, you will need to use the power adapter to:

- provide power from a mains outlet
- or
- charge a battery pack

Notes:

- The power adapter converts current from a household power outlet (100–240 V AC, 50/60 Hz) to the DC current used by your camera.
- If the adapter is used next to a TV, it may cause the TV to emit noise — move the adapter away from the TV or the antenna cable.

Connecting the camera to a mains outlet

Use the power adapter and the DC coupler to provide your camera with instant power from a mains outlet.

1. Attach the DC coupler to the camera.

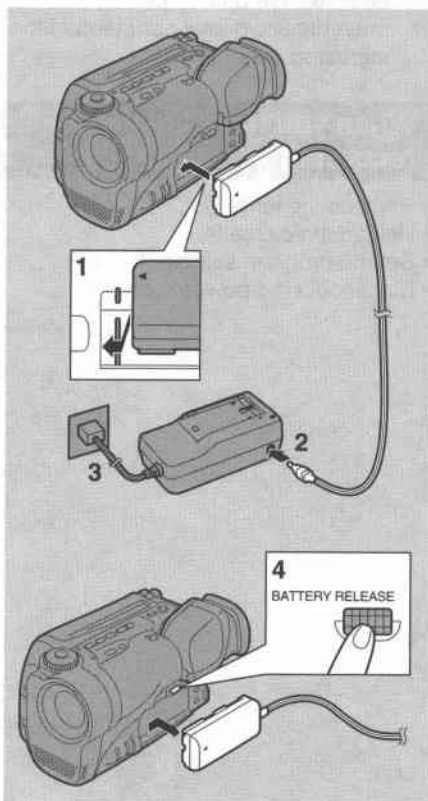
- Align the triangle on the DC coupler with the line on the camera.

2. Connect the DC coupler to the adapter.

3. Plug the adapter into a mains outlet.

4. Detach the DC coupler after use.

- Press and hold the BATTERY RELEASE button.
- Always turn the camera off before removing the power source.



Charging and attaching the battery pack

Your battery pack was partially charged before it left the factory. It should have enough power for you to check that your camera is working properly. However, you must charge the battery pack fully if you want it to power the camera for more than a few minutes.

1. Attach the battery pack to the power adapter.

- Align the triangle on the battery pack with the line on the camera.
- Make sure the DC coupler is not connected.

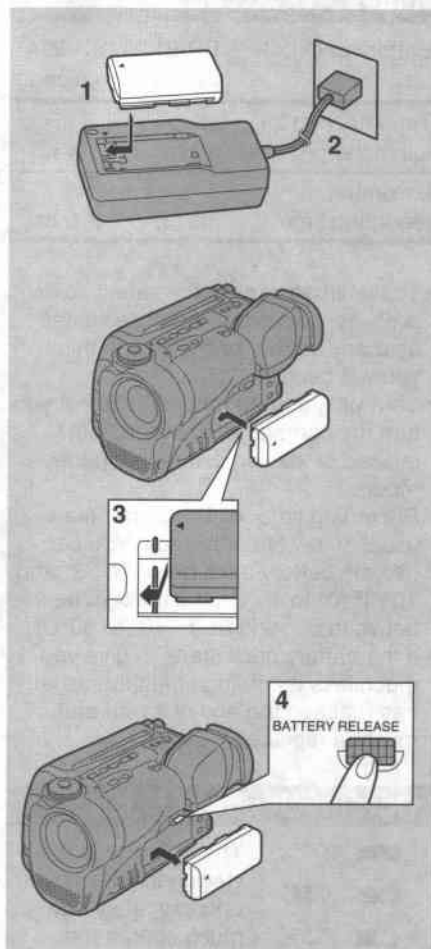
2. Plug the adapter into a mains outlet.

- The charge indicator flashes red to show that charging is in progress. Single flashes mean that the battery pack is less than 50% charged. Double flashes mean that it is between 50% and 75% charged. Triple flashes mean that it is more than 75% charged.
- The indicator glows steadily when the battery pack is fully charged.

3. Take the battery pack off the adapter and attach it to the camera.

4. Detach the battery pack after use.

- Press and hold the BATTERY RELEASE button.
- Always turn the camera off before removing the power source.

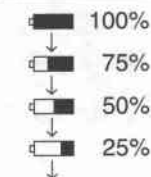


Charging and recording times

Battery pack	BP-911 (supplied)	BP-924 (optional)
Time needed for full recharge	2 hr.	3 1/2 hr.
Maximum recording time	1 hr.	2 1/2 hr.

- These times vary — the safest policy is always to have two or three times as many battery packs as you think you will need.
- You will get more recording time if you turn the camera off between shots, instead of leaving it in record pause mode.
- Recording time will be shorter than usual at low temperatures. You can use the battery pack between 32° and 104°F (0° to 40°C), but it works best between 50° and 86°F (10° to 30°C).
- If the battery pack starts to give you much less recording time than usual, it has reached the end of its life and must be replaced.

How much power is left?

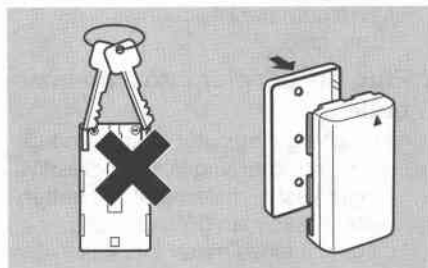


The indicator in the viewfinder shows you approximately how much charge the battery pack has left:

When to recharge

You can recharge a lithium ion battery pack whenever it is convenient. Unlike a conventional battery pack, it does not have to be fully discharged first. However, as the battery pack will naturally discharge itself over time, it is best to charge it the same day you plan to use it, or the day before.

Taking care of the battery pack



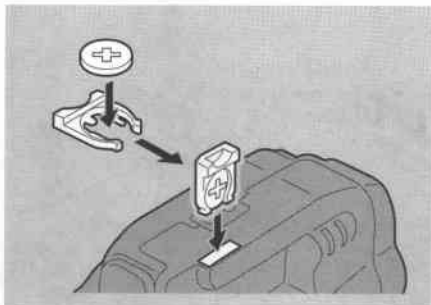
Always attach the terminal cover.

- Do not allow any metal objects to touch the terminals, as this can cause a short circuit and damage the battery pack. Attach the terminal cover whenever the battery pack is not being used.

Keep the terminals clean.


- The camera, adapter or battery pack will not work properly if the terminals are dirty. Check them before use, and wipe them with a dry cloth or tissue if necessary.

Installing the backup battery



Pull out the battery holder from the base of the camera, and insert the CR2025 lithium battery with the + side facing upwards. Click the holder back into place.

This backup battery allows the camera to remember the date and time and other settings when the main power source is removed. It has a life span of about a year.

When it needs replacing (or if it has not been installed), the  mark flashes in the viewfinder. Remove the old battery by pushing it down and pulling it out. Make sure to attach a power source to the camera first, and turn it off using the STANDBY cover. This way it will remember your chosen settings when you change the battery.

DANGER!

Treat the battery pack with care.

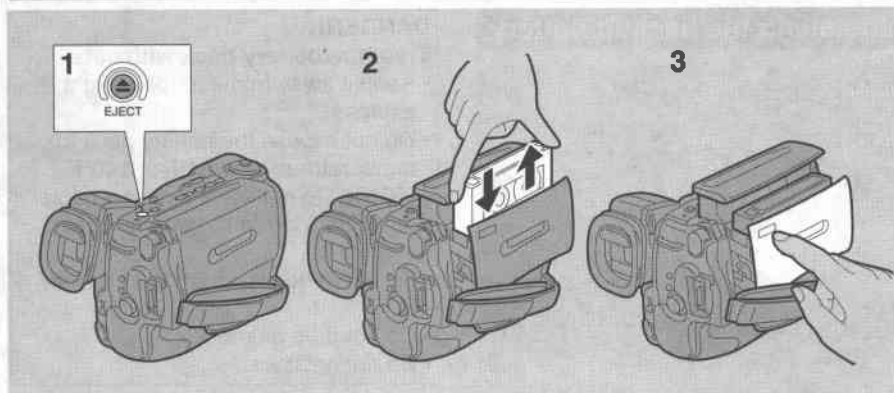
- Keep it away from fire (or it might explode).
- Do not expose the battery pack to temperatures greater than 140°F (60°C). Do not leave it near a heater, or inside a car in hot weather, for example.
- Do not try to disassemble or modify it.
- Do not drop or knock it.
- Do not get it wet.

WARNING!

- The battery used in this device may present a fire or chemical burn hazard if mistreated. Do not recharge, disassemble, heat above 212°F (100°C) or incinerate.
- Replace the battery with a Sony, Sanyo or Panasonic CR2025, or Duracell DL2025. Use of another battery may present a risk of fire or explosion.
- The used battery should be handed back to the supplier for safe disposal.



Cautions:

- Do not pick up the battery using tweezers or other metal tools — this will cause a short circuit.
- Wipe the battery with a clean, dry cloth to ensure proper contact.
- Keep the battery pack out of reach of children - if it is swallowed, contact a physician immediately, as the battery case may break down and the battery fluids damage the stomach and intestines.
- Do not disassemble, heat, or immerse the battery in water, to avoid the risk of explosion.



Use video cassettes marked with a **Hi8** or **8**.

Loading and unloading

1. Press the **EJECT**  button and wait for the cassette compartment to open.
2. Load or unload the cassette.
 - Insert the cassette gently with the window facing out.
 - Remove the cassette by pulling it straight out.
3. Press the **PUSH**  mark on the compartment until it clicks, and wait for it to close.
4. Click the cover back into place.

Notes:

- See p. 29 for information on protecting your recordings from accidental erasure.
- After loading a cassette, use record search (p. 30) to find the point where you want to start recording.
- Do not interfere with the cassette compartment while it is opening or closing automatically.
- Do not leave the cassette in the camera after use — return it to its case and store it in a cool, clean, dry place.
- The holes in the back of the cassette are used for transferring information — do not cover them.

Preparing the Camera

You should already have attached a power source to the camera and loaded a cassette. When you have completed the following steps, you will be ready to start recording.

Prepare the lens cap

- Attach the cord to the lens cap, and pass the grip belt through the loop on the cord.
- Hook the lens cap on to the grip belt while you are recording, and place it over the lens when you have finished.

Fasten the grip belt

- Release the Velcro fastening and hold the camera with your right hand while you adjust the belt with your left.

Adjust the viewfinder

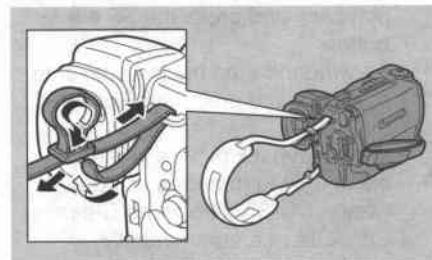
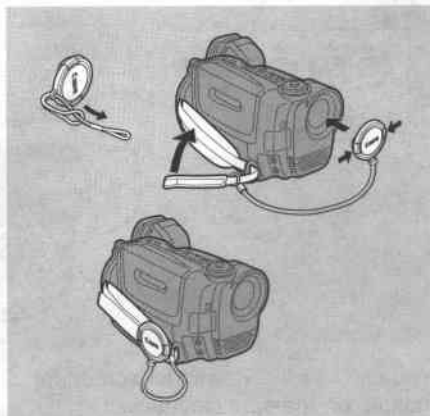
- Turn the camera on, raise the viewfinder to the vertical position and turn the viewfinder focusing wheel until the viewfinder displays are clearly focused.
- The viewfinder rotates through 90° to give a choice of shooting positions.

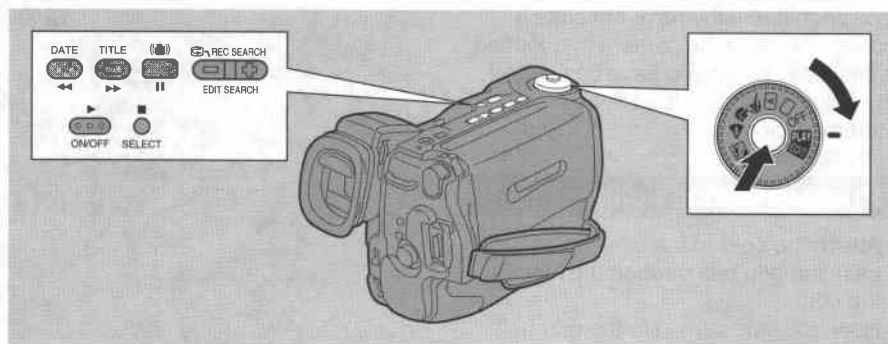
Attach the shoulder strap

- For extra security and portability, attach the shoulder strap before using the camera.
- Pass the ends through the attachment bars and adjust the length as shown.

Note:

- Be careful not to leave the viewfinder exposed to bright sunlight, or it will melt. (The light is concentrated by the viewfinder lens.) You may be able to move the viewfinder out of direct sunlight by pushing it upright, or by moving it back down to horizontal.





You can use the viewfinder screen for instant, on-the-spot playback.

To play back your recordings on a TV, see p. 17. To use the wireless controller, see p. 23.

Note:

- To avoid accidental recording, make sure that you slide the red switch on the cassette so that it covers the hole (the switch position is usually labelled SAVE or ERASE OFF).

1. Attach a power source and set the program selector to **PLAY**.

- The operation indicator lights up.

2. Load the cassette.

3. Press the **PLAY ►** button to start playback.

- To end playback, press the **STOP ■** button.
- To wind the tape forwards, stop playback and press the **FF ►►** button.
- To wind the tape backwards, stop playback and press the **REW ◄◄** button.
- If the playback picture is rough, clean the video heads using a Canon CC-8 Video Head Cleaning Cassette or a commercially available dry-type head cleaning cassette.

Special playback

Still playback

Press the **PAUSE ||** button. To resume normal playback, press it again, or press the **PLAY ►** button. The camera automatically goes into stop mode after about five minutes' still playback.

Edit Search

When the camera is in still play back mode, you can use edit search to play the tape forwards or backwards to find the point where you want to start or restart editing. This is useful when you want to find cut-in and cut-out points in edit mode.

Press and hold the **EDIT SEARCH +** and **-** button during playback, while you check the picture in the viewfinder.

- The **+** button plays the recording forwards and the **-** button plays it backwards.

Release the button when you find the point where you want to start editing.

- The camera returns to still playback mode.

Fast forward playback

To play back the recording at about 7 times normal speed, press and hold the **FF ►►** button during normal playback or press and hold the **FF ►►** button during normal fast forward.

Rewind playback

For reverse playback at about 5 times normal speed, press and hold the REW ◀◀ button during normal playback or press and hold the REW ◀◀ button during normal rewind.

Frame Advance

To play back frame by frame, press the +/▶▶ button repeatedly during still playback.

Press and hold to playback continuous frame advance.

Frame Reverse

To playback on reverse frame by frame, press the -/◀◀ button repeatedly during still playback.

Press and hold to play back continuous frame reverse.

Slow Forward Playback

To play back at about 1/5 normal speed, press the SLOW I▶ button during normal playback.

Press the PLAY ▶ button return to normal playback.

- The camera automatically returns to reverse playback after about 30 seconds of slow playback.

Slow Reverse Playback

To play back in reverse at about 1/5 normal speed, press the -/◀◀ button and then the SLOW I▶ button during normal playback. Press PLAY ▶ to return to normal playback.

- The camera automatically returns to reverse X1 playback after about 30 second of slow playback.

Reverse Playback

To play back in reverse at normal speed, press the -/◀◀ button during normal forward playback. Press the PLAY ▶ button to return to normal forward playback.

Forward X2 Playback

Press the +/▶▶ button and then the X2 button during normal playback.

Press the PLAY ▶ button to return to normal playback.

Reverse X2 Playback

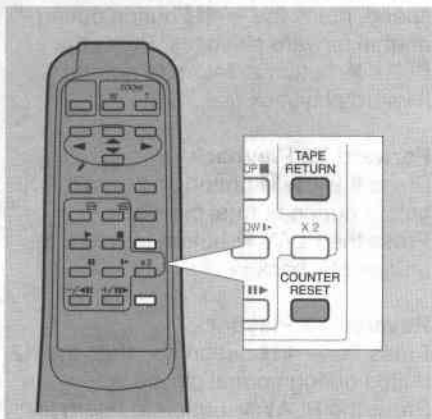
Press the -/◀◀ button and then the X2 button during normal playback.

Press the PLAY ▶ button to return to normal playback.

Notes:

- Noise bars appear on the screen during special playback and the sound track cannot be heard. On certain TVs the picture may roll and divide, or appear in black and white, and the high-speed search picture may not be visible.
- During still playback, the picture flickers, and fast action scenes may appear blurred.
- The special playback functions are especially useful when used with the Auto Editing Function. (See pp.44-54)

Tape return



Use the wireless controller's **TAPE RETURN** button to quickly return to a scene you want to see again. You can only operate this from the wireless controller.

Notes:

- To use tape return, be sure to select **COUNTER** from the playback menu (see p. 22).
- You are not able to use the tape return function while using time code.

1. Press the **COUNTER RESET** button during playback if you come across a scene you want to watch again later.

- The tape counter is reset to 0:00:00.

2. When you have ended playback, press the **TAPE RETURN** button.

- The tape rewinds and stops when the counter nears 0:00:00.
- You can cancel tape return by pressing the **STOP** ■ button.

3. Start playback.

About Hi8

To record or play back in the Hi8 format, you need both a Hi8 camcorder and a Hi8 cassette (you can use either Metal-P or Metal-E Hi8 cassettes).

A Hi8 camcorder can record or play back in either the Hi8 format or standard 8mm format, depending on the tape used.

The superior quality of Hi8 can best be appreciated on a TV which has an S-video input terminal.

Note:

- The tape counter is reset when a cassette is loaded.

Playback Connection

E

You can connect the camera to a TV or VCR in order to play back your recordings. You will need to attach a power source to the camera (see p. 8).

See your TV/VCR instruction manual for details.

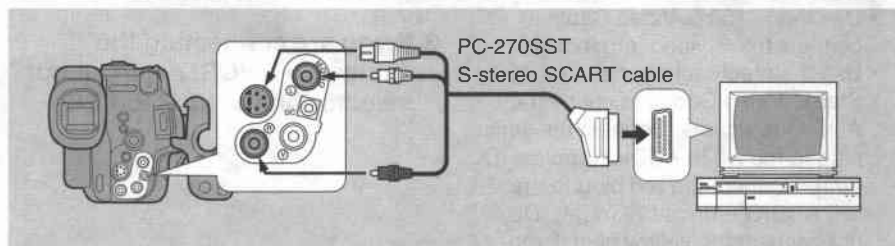
Notes:

- If you are going to use the TV as a monitor while you are shooting, remember to keep the TV volume turned down as long as the

camera's AUDIO terminals are connected. If the sound from the TV speakers is picked up by the microphone, an unpleasant high-pitched squeal, called feedback, may be produced.

- If you want a mono output, connect the cable to the camera's left AUDIO terminal ①, but do not connect the right AUDIO terminal ②. This will give a combined mono output from both left and right channels.
- The superior quality of Hi8 can best be appreciated on a TV which has S-video input.

If your TV (or VCR) has a SCART terminal (S-video)



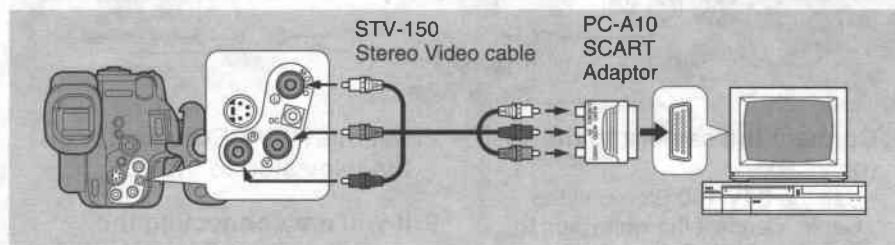
1. Connect the camera to the TV (or VCR).

- Connect the camera using the optional PC-270SST S-stereo SCART Cable. Connect the white plug to the white audio terminal ① (left). Connect the red plug to the red audio terminal ② (right). Connect the S-video plug to the S-video terminal ③.

2. Set the TV/VIDEO selector on the television to VIDEO.

3. If you are connecting the camera to a VCR, set the input selector on the VCR to LINE.

If your TV (or VCR) has a SCART terminal (without S-video)



1. Connect the PC-A10 SCART adaptor to the TV or VCR's SCART terminal.

2. Connect the camera to the adaptor.

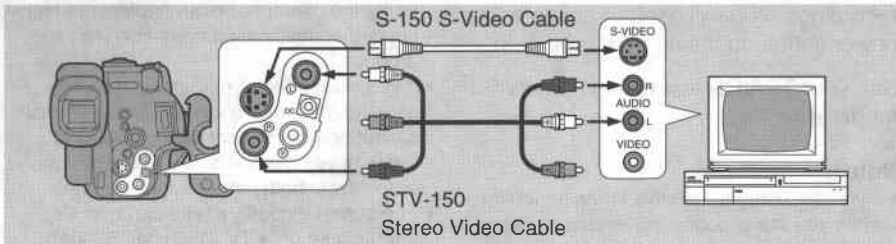
- Connect the camera using the STV-150 Stereo Video Cable. Connect the white plug to the white audio terminal ① (left). Connect the red plug to the red audio

terminal ② (right). Connect the yellow plug to the yellow video terminal ④.

3. Set the TV/VIDEO selector on the television to VIDEO.

4. If you are connecting the camera to a VCR, set the input selector on the VCR to LINE.

If your TV (or VCR) has an S-video input terminals



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Basic Operation

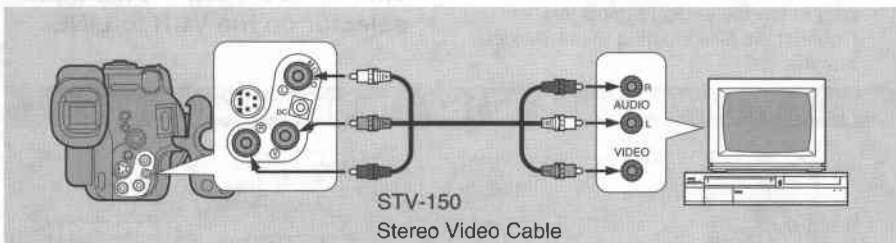
1. Connect the camera to the TV (or VCR).

- Use the S-150 S-Video Cable to connect the S-video terminal ㊟.
- Use a stereo cable or the STV-150 Stereo Video Cable, to connect the AUDIO terminals. Connect the white plug to the white AUDIO terminal ㊟ (left). Connect the red plug to the red AUDIO terminal ㊟ (right). Do not connect the yellow plug if you are using the STV-150 Stereo Video Cable.

2. Set the TV/VIDEO selector on the television to VIDEO.

3. If you are connecting the camera to a VCR, set the input selector on the VCR to LINE.

If your TV (or VCR) has audio/video input terminals



1. Connect the camera to the TV (or VCR).

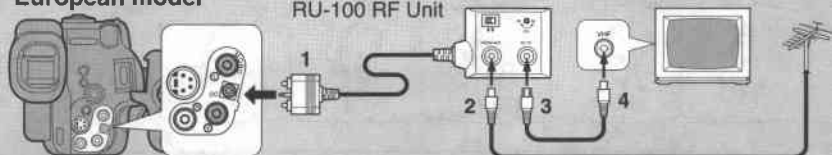
- Use the STV-150 Stereo Video Cable. Connect the white plug to the white AUDIO terminal ㊟ (left). Connect the red plug to the red AUDIO terminal ㊟ (right). Connect the yellow plug to the yellow VIDEO terminal ㊟.

2. Set the TV/VIDEO selector on the television to VIDEO.

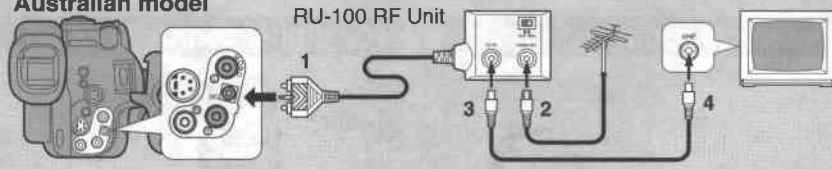
3. If you are connecting the camera to a VCR, set the input selector on the VCR to LINE.

If your TV does not have audio/video input terminals

European model



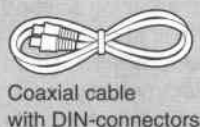
Australian model



If your TV is already hooked up to a VCR, you can connect the camera to the VCR instead of the TV. Follow the instructions on p. 14 or 15.

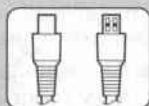
To connect the camera directly to a TV which does not have audio/video terminals, you will need to use the optional RU-100 RF Unit. The soundtrack will be in mono. There are two different models, one for Australia, and one for Europe and other areas.

Connecting the RF unit



Coaxial cable with DIN-connectors

Male Female

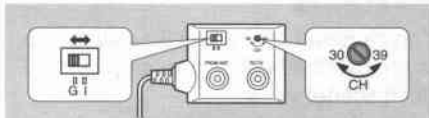


1. Connect the RF unit to the camera.
2. Connect the aerial cable to the **FROM ANT.** terminal on the RF unit.
3. Connect the "female" DIN-connector on the coaxial cable to the **TO TV** terminal on the RF unit.
4. Connect the "male" connector to the aerial input on the TV.
5. Turn the TV on, and start playback on the camera.
 - See p. 14 for playback.
6. Set both the TV and the RF unit to the video channel.

Selecting the video channel

The video channel is the channel which is not used by a broadcasting station in your area and can be used for cassette playback.

European model

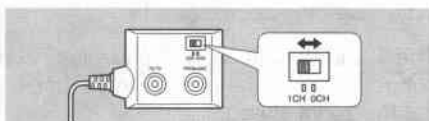


First set the G/I selector on the RF unit.

- In continental Europe, set it to G.
- In the UK, Hong Kong and South Africa, set it to I. If it is not set properly, you will be able to see the picture, but not hear the sound.

Next, set the TV and the CH selector on the RF unit to the video channel. The selector is factory-set to channel 32. Adjust it by turning until the picture is clear.

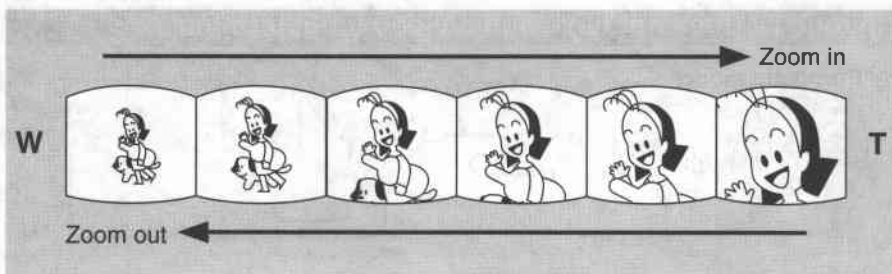
Australian model



Set the TV and the RF unit to channel 0 or 1.

Note:

- Turn the camera off or disconnect it from the RF unit when you want to watch a broadcast programme. If you leave the camera connected and turned on, the RF unit will automatically select the camera signal instead of the broadcast signal.



20× optical zoom



The camera's 20× zoom lens allows you to choose the best picture angle for each scene:

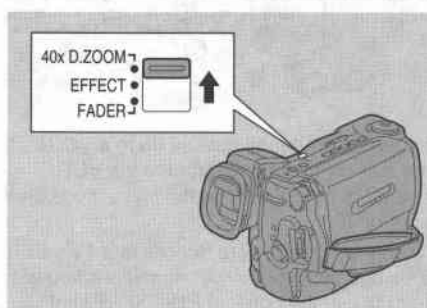
- Turn the zoom control towards W to zoom out to wide-angle.
- Turn it towards T to zoom in to telephoto.

You can also control the speed of zooming:

- Move the control slightly to zoom slowly.
- Turn it further to zoom more quickly. (The further you turn the zoom control, the faster the zoom speed.)

The T and W buttons on the wireless controller adjust the picture angle, but not the zoom speed.

40× digital zoom



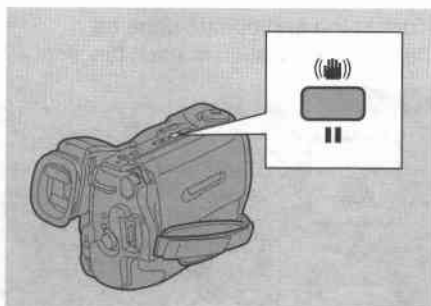
Slide the digital effects slide switch to the 40× D. ZOOM position to double the camera's zoom range.

The zoom control continues to work as usual, but if you keep zooming beyond 20× magnification (the limit of the optical zoom), the camera will begin to enlarge the image electronically. You can freely zoom in and out between 1× and 40× magnification — the camera automatically switches between optical zooming (up to 20×) and digital zooming (20 to 40×).


Notes:



- When you want to get as close as possible to your subject, keep the zoom at the wide-angle position. You can focus on a subject as close as 3/8 in (1 cm).
- Image resolution is slightly lower when the magnification is greater than 20×.

Optical Image Stabilizer



With most camcorders, even the slightest hand movements will be noticeable during telephoto recording. However, the UC-X30Hi's Optical Image Stabilizer allows you to obtain steady recordings even at 20x or 40x magnification. Unlike electronic image stabilizers, it causes no loss of picture quality. The Optical Image Stabilizer can compensate for a wide range of camera movement — you can record stable images even if you are shooting from a moving car.

Before you start recording push the  ON/OFF button to turn the image stabilizer on or off.

- The  mark appears in the viewfinder when the stabilizer is on.
- The image stabilizer cannot be turned off when the program selector is set to the  (Easy Recording) position.

Notes:

- The image stabilizer is designed to deal with a normal degree of camera shake.
- Keep the image stabilizer turned off when the camera is mounted on a tripod.

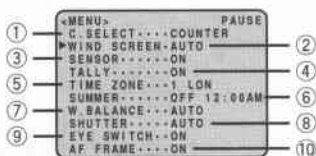
Using the Menus

E

Some of the camera's advanced functions are selected from menus which appear in the viewfinder.

There are three menus. When the camera is in record pause mode, you can open the camera menu. When the program selector is set to **PLAY**, you can open the playback menu. When the program selector is set to **EDIT**, you can open the editing menu.

Camera menu



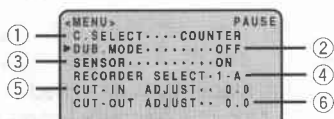
- ① Counter select p. 42
- ② Wind screen p. 41
- ③ Remote sensor p. 23
- ④ Tally lamp p. 29
- ⑤ World clock p. 25
- ⑥ Summer time p. 26
- ⑦ White balance p. 35
- ⑧ Shutter speed p. 36
- ⑨ Eye-controlled switches p. 60
- ⑩ Eye Control frame p. 59

Playback menu



- ① Counter select p. 42
- ② Dubbing mode p. 55
- ③ Remote sensor p. 23

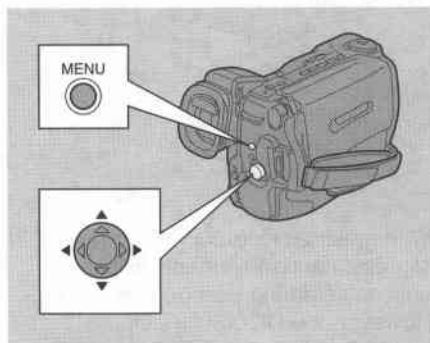
Editing menu



- ① Counter select p. 42
- ② Dubbing mode p. 55
- ③ Remote sensor p. 23
- ④ Recorder select p. 46

- ⑤ Cut-In time adjustment p. 50
- ⑥ Cut-Out time adjustment p. 50

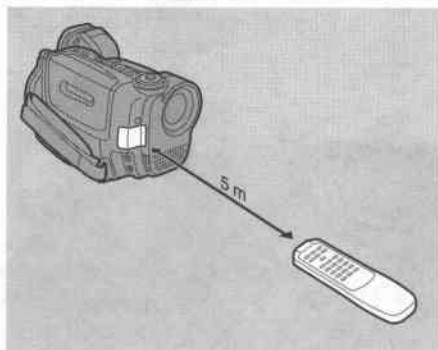
Turn to the appropriate page for a detailed explanation of each function.



1. Press the MENU button to open the menu.
2. Press the contourller up or down to move the arrow up or down the display.
3. Press the contourller sideways to turn the function on or off, or to change its setting.
4. Press the MENU button again to close the menu.

Notes:

- To return all the functions on one menu to their original settings (other than automatic date settings for time zone changes, recorder select and cut-in/cut-out adjust, open the menu then press and hold the C. RESET button.
- You can display the menus on a connected TV screen using the wireless controller's ON SCREEN button.



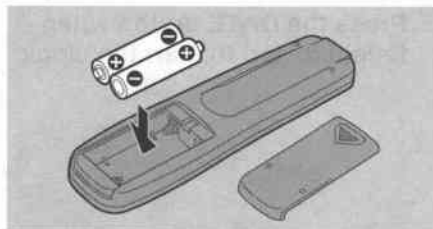
The supplied wireless controller can operate the camera from a distance of up to 5 m. Point it at the camera's remote sensor while you press the buttons.

The tally lamp lights up to let you know that the camera is in range and responding to your commands.

There are two functions which can only be operated using the wireless controller:

- Tape return (p. 16)
- On-screen viewfinder displays (p. 75)

Inserting batteries



Insert two AA batteries, following the ⊕ and ⊖ markings. Be careful not to reverse the polarity of the batteries.

Turning off the remote sensor



►SENSOR.....OFF

The remote sensor can be turned off to prevent interference from other Canon wireless controllers being used nearby.

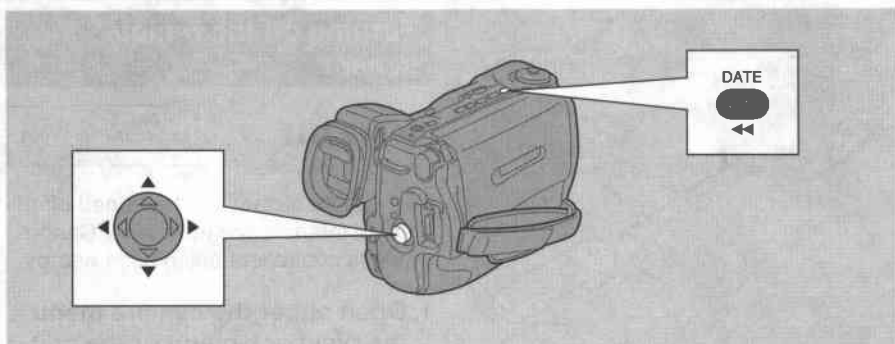
1. Open either the camera menu, the playback menu or the edit, and point the arrow at SENSOR.

2. Select the OFF setting and close the menu.


- S **OFF** appears in the viewfinder.

Notes:

- When using the wireless controller in brightly lit places or outdoors, the effective range will be shortened and narrow.
- The camera may have difficulty picking up the remote control signals at extremely close range.
- Do not leave the controller exposed to direct sunlight, or in hot or humid places.
- When the batteries run out, replace them both together.



The date and/or time display appears in the viewfinder when you press the DATE button. If you start recording now, it will be superimposed on the scene. Press the button again to cancel the display.

 The date and time display can also be operated by Eye Control (see p. 56).

Setting the date and time

Set the date and time display when you first start using your camera. Install the backup battery before you begin (see p. 11).

1. Put the camera in record pause mode.

- If you are going to take the camera overseas, you will want to use its world clock. In this case, select your home time zone from the menu now (see p. 25).
- If you are correcting the date and time, make sure the world clock is set to your home time zone.
- If you are on summer time now, you should put the camera on summer time (p. 26). You can do this at the same time as selecting your home time zone.

2. Press and hold the date button for about 3 seconds, until the year display in the viewfinder starts flashing.

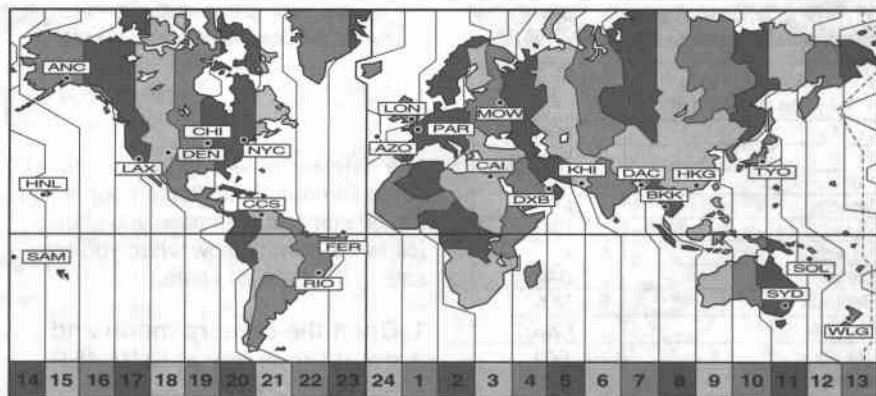
- If the menu is open, it will close automatically.

3. Press the controller up and down to change the year. Press sideways to move to another part of the display.

- Press once to scan a year at a time. Press and hold to scan quickly.
- Once you move from the year, the next part of the display starts flashing.

4. Set the months, days, hours, and minutes in the same way.

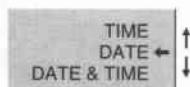
5. Press the DATE button when finished, and to start the clock.



Changing the style

When the date and/or time is displayed in the viewfinder, you can change the display style by pressing and holding the DATE button for one second. You can choose from three different date/time displays.

Press the controller up and down to set the display style.



The camera will remember which type of display you have selected.

Changing time zones



▶ TIME ZONE...1 LON

When you travel to another time zone, there is no need to reset the date and time. Use the camera's world clock to display the correct time for your destination. When you set the date and time (p. 24), select your home time zone. Afterwards, you can select the zone you are visiting.

First, identify the time zone:

World Times

If you are visiting somewhere in the same time zone as:	Set the menu to:
London	1 LON
Paris	2 PAR
Cairo	3 CAI
Moscow	4 MOW
Dubai	5 DXB
Karachi	6 KHI
Dacca	7 DAC
Bangkok	8 BKK
Hong Kong	9 HKG
Tokyo	10 TYO
Sydney	11 SYD
Solomon	12 SOL
Wellington	13 WLG
Samoa	14 SAM
Honolulu	15 HNL
Anchorage	16 ANC
Los Angeles	17 LAX
Denver	18 DEN
Chicago	19 CHI
New York	20 NYC
Caracas	21 CCS
Rio de Janeiro	22 RIO
Fernando de Noronha	23 FER
Azores	24 AZO

1. Open the camera menu and point the arrow at TIME ZONE.

2. Select the time zone.

- If you set the date and time without closing the menu, this will become your home time zone.
- If you close the menu, the camera takes this as the time zone you will be visiting. It will be shown in the viewfinder (but not recorded) whenever the date/time is displayed.

Changing to summer time



MENU

(see p. 22)

►SUMMER.....ON

The date and time display can easily be set to summer time. Remember, if you are on summer time now, you should follow the steps below when you are setting the date and time.

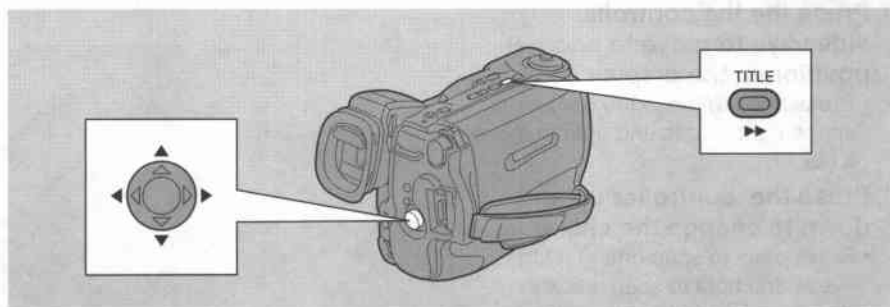
1. Open the camera menu and point the arrow at SUMMER.

2. Select the ON setting.

- You can now set the date and time by pointing the arrow at time zone and pressing and holding the date button (see p. 24).
- If you have already set the date and time, close the menu.
- The * mark will be shown in the viewfinder (but not recorded) whenever the date/time is displayed.

Notes:

- If you need to correct date and time, make sure the world clock is set to your home time zone.
- The date can be set to any year between 1996 and 2020.



You can write your own titles and store them in the camera's memory in order to add them to your recordings.

The title is displayed in the viewfinder when you press the TITLE button. If you start recording now, it will be superimposed on the scene.

Press the button again to cancel the display. If it does not appear in the viewfinder, it will not be recorded.

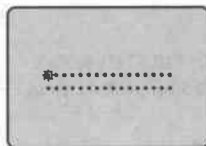


The title display can also be operated by Eye Control (see p. 60).

Writing a title

Enter your title in the camera's memory before you start recording. Remember to install the backup battery first (see p. 11).

The title can be one or two lines of up to 16 characters each.



These lines appear in the viewfinder when you are writing a title.

1. Put the camera in record pause mode.
2. Press and hold the **TITLE** button until the title lines appear in the viewfinder.

- If you have already entered a title in the memory, it will be displayed in the viewfinder.
- The first dot (or character) flashes to show where the cursor (the insertion point) is located.

3. Press the the controller sideways to move to another position in the display.

- Press once to move the cursor one space right. Press and hold to move it quickly.

4. Press the controller up and down to change the character.

- Press once to scan one at a time. Press and hold to scan quickly.
- You can choose from the following characters:

→ ABCDEFGHIJKLMNOPQRSTUVWXYZ ←
 → ✱ & * ! ? ; : " ' - . , 9 8 7 6 5 4 3 2 1 0 ✱ Ë Ç Ñ Æ Å Ø Ù Ö Å ←

- If you choose the flashing dot ✱ , nothing will be recorded at this position.
- You can erase all the characters at and to the right of the cursor by pressing and holding the C. RESET button for more than one second.

5. Repeat steps 3 and 4 until your title is complete, then press the TITLE button to enter the title in the memory.

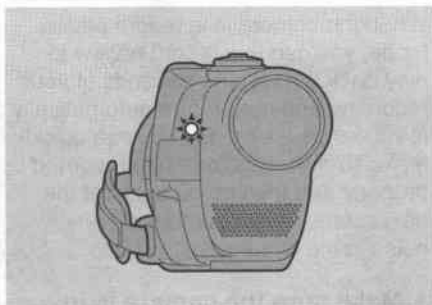
Note:

- If it takes you more than about five minutes to write a title, the camera may turn itself off automatically. This can be avoided by removing the cassette before you begin.

Tally Lamp and Tape Protection

E

Turning off the tally lamp



▶ TALLY.....OFF

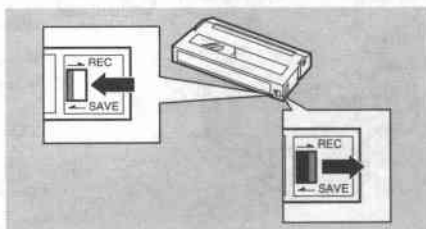
The tally lamp lets you know that the camera is recording. However, its flashing may be reflected into the lens during close-up recording, or when recording through glass.


1. Open the camera menu or edit menu and point the arrow at TALLY.

2. Select the OFF setting and close the menu.

- The tally lamp no longer flashes during recording, but it will still light up when the camera receives a signal from the wireless controller.

Protecting tapes from accidental erasure



To protect your recordings from accidental erasure, slide the red switch on the cassette so that it covers the hole. (This switch position is usually labeled SAVE or ERASE OFF.) When this cassette is loaded, the  mark will flash in the viewfinder if you put the camera in record pause mode.

If you want to record on the cassette again, slide the red switch back so the hole is open. (This position is usually labeled REC or ERASE ON.)




Record search

When the camera is in record pause mode, you can use record search to play the tape forwards or backwards to find the point where you want to start or restart recording. This is useful when you want to add a new scene to a previously used cassette. By using record search, you can ensure a smooth, noise-free join between the new scene and the old one.

- 1. Make sure the camera is in record pause mode.**
- 2. Press and hold the RECORD SEARCH + or – button while you check the picture in the viewfinder.**
 - The + button plays the recording forwards and the – button plays it backwards.
- 3. Release the button when you find the point where you want to start recording.**
 - The camera returns to record pause mode.

Record review

When the camera is in record pause mode, you can use record review to play back the last few seconds of your recording and then return automatically to record pause mode. You can quickly make sure that a scene has recorded properly and then go on to shoot the next scene, without producing any noise in the picture.

- 1. Make sure the camera is in record pause mode.**
- 2. Press and release the  (record review) button while you check the picture in the viewfinder.**

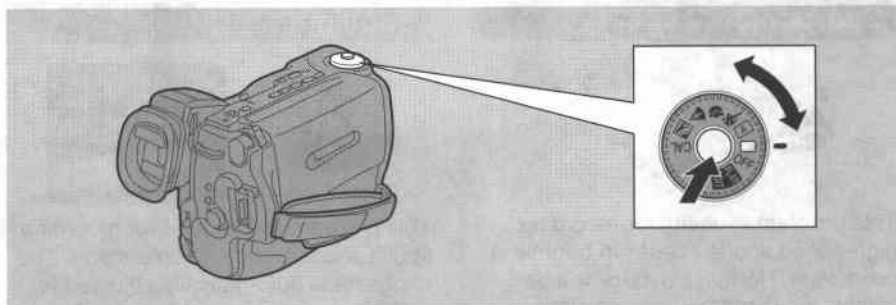
- The camera rewinds the tape, plays back the last few seconds, and returns to record pause mode.



Record review can also be operated by Eye Control (see p. 60).

Note:

- Noise or skew (picture distortion) may appear on the screen during record search and record review.



The camera provides you with a choice of six recording programs. They use different combinations of camera settings in order to adjust the exposure and other functions to match the recording situation.

- For simple point-and-shoot operation, select the Easy Recording program. Turn the program selector to the ☐ position.
- For normal shooting conditions, set the selector to ☐ (Auto).
- For difficult recording conditions, the camera has four more specialized AE (auto exposure) programs.

Press and hold the lock button when you move the selector from the OFF position.

Easy Recording



The simplest way to use the camera is with the program selector set to the ☐ position. The camera will take care of focus, exposure and other adjustments, leaving you free to point and shoot.

If you select this Easy Recording program, you cannot use:

- Exposure lock or compensation
- White balance set
- Digital effects
- Digital faders

Also, autofocus and image stabilization cannot be turned off.

Auto



In normal recording conditions, set the program selector to ☐ (Auto). This is the same as the Easy Recording program, except that you now have the option of using any of the camera's manual functions — you can adjust focus and exposure, set the white balance, and so on.

- Choose this Auto program if you want to use the manual shutter (p. 36).

Sports



This program is useful for recording high-speed sports scenes in brightly lit conditions. Normal playback will be slightly jerky, but you will get clear images which can be analyzed frame by frame during slow or still playback on a VCR.

Spotlight



This program is designed for recording spotlight scenes, such as on a stage. The exposure is automatically adjusted for glare-free recordings of subjects lit by a concentrated light source.

- Manual focus can be used in this mode (p. 34).

Portrait



Use this program outdoors to make the subject stand out from a softened foreground and background. It works well for still-lives and close-ups. The effect is most noticeable when the zoom position is between the middle range and the telephoto end. Focus manually for maximum accuracy, and be careful when recording action scenes, as this program may cause fast-moving images to shudder.

Sand & Snow

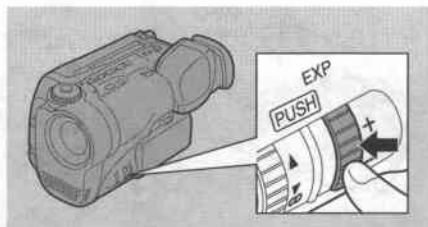


Use this program in places where the background is so bright that the subject appears underexposed in the viewfinder — a sunny beach or ski resort, for example. As with the Portrait program, you may notice some shudder when recording moving subjects.

Notes:

- Avoid changing programs during recording as the brightness of the image may change suddenly.
- The specialized AE programs are not suitable for all kinds of lighting. The image may flicker, or a bright line may appear on the screen if you use them in the wrong lighting conditions.

Exposure lock



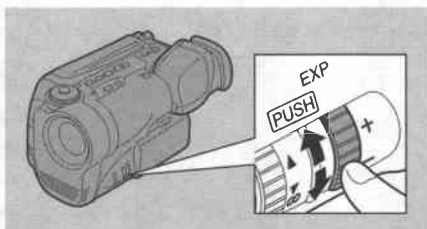
When you are recording in situations where the lighting may change suddenly, you can lock the exposure at the current level in order to control the brightness of the image.

Note:

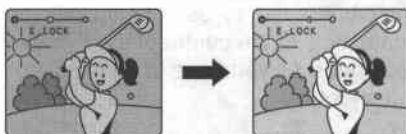
- When you are using Eye Control, the camcorder adjusts the area inside the frame to the appropriate exposure and then locks.

To lock the exposure, press the EXP wheel. Press it again to return to the automatically set exposure level.

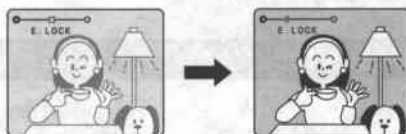
Exposure adjustment



When the exposure is locked, you can adjust it manually, making the picture brighter or darker in order to deal with difficult lighting conditions, or to manipulate the mood of the scene. The camera's iris can be manually set to any position from fully closed to fully open.




To make the recorded image brighter, turn the EXP wheel upwards (towards +). This may be necessary if the background is very bright, or if the subject is lit from behind.



To make the recorded image darker, press the EXP wheel downwards (towards -). This may be necessary if the background is very dark, or if the subject is spotlighted.

Notes:

- The standard exposure level depends on which recording program you have selected.
- Exposure lock is canceled if you change recording programs.
- You cannot use exposure lock or adjustment when the program selector is set to the  (Easy Recording) position.
- If you use the negative-positive conversion (Digital Effects p. 37) turn the exposure wheel in the opposite direction to that shown above. The display will also be opposite.

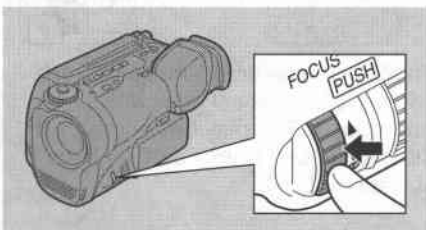
Manual Focus

E

The camera can focus automatically on whatever is in the centre of the viewfinder. All you have to do is point and shoot.

If it does not seem to be focusing well, it may be because the subject is not suitable for autofocus (see “Troubleshooting” on p. 72). In such cases, you can lock the focus or adjust it manually.

Focus lock

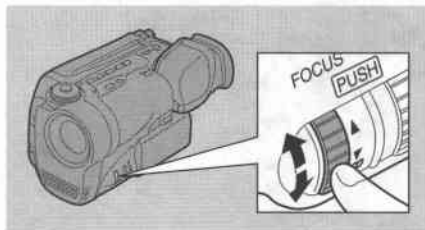


Press the FOCUS wheel to turn off autofocus. The focus remains locked at the point set by autofocus.

(AF OFF appears in the viewfinder.) You can now adjust the focus manually. Press the FOCUS wheel again when you want to return to autofocus.

- If you zoom in on your subject after turning off autofocus, it may not stay in focus. It is generally best to adjust the zoom first, and then the focus.

Manual focus



Use the FOCUS wheel to set the focus.

- Turn it downwards (towards ∞) to move the focus further away.
- Turn it upwards to bring the focus nearer.

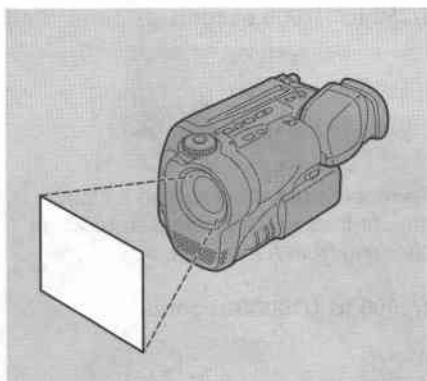
You can also adjust the focus without turning autofocus off — in this case autofocus will start again as soon as you release the FOCUS wheel.



Eye-controlled focus is explained on p. 58.

Notes:

- The manual focus setting is cancelled if you turn the program selector to the OFF position, or if you select the ☐ (Easy Recording) program.
- When you are using the Easy Recording program, autofocus cannot be turned off, but you can override it temporarily by turning the FOCUS wheel.



The camera's auto white balance system compensates for a wide range of lighting conditions. Although slight variations are unavoidable, colours will appear natural in virtually every situation.

In some cases, you will get better results by setting the white balance manually.

Setting the white balance



▶ W. BALANCE . . . SET

1. **Open the camera menu and point the arrow at W. BALANCE.**
2. **Point the camera at a white object (such as a sheet of paper) and zoom in until it fills the viewfinder.**
3. **Select SET.**
 - The SET display flashes then remains lit.
 - Depending on the light source, the flashing may at times continue. The result will remain better than with the auto setting and you can continue recording.
4. **Close the menu.**
 - **WB** is displayed in the viewfinder.

Setting the white balance manually will probably work better than auto white balance when shooting:



Subjects with one dominant colour, such as sky, sea or forest.



Close-ups



In rapidly changing lighting conditions





In places lit by certain types of fluorescent or mercury vapor lights.



White balance can also be set using Eye Control (see p. 61).

Notes:

- If the lighting conditions change, reset the white balance by first returning to the AUTO setting, and then reselecting SET.
- Try to record with light from a single source. Correct white balance cannot be obtained for two types of lighting at once.
- You cannot set the white balance manually when the program selector is set to the  (Easy Recording) program.
- When the program selector is set to the  (Easy Recording) program or OFF position, the white balance setting returns to the AUTO.
- When the STANDBY cover is closed without changing the program selector, the current white balance setting remains in memory.



▶ SHUTTER.....250

The shutter speed is usually controlled automatically, but you can also set it manually, as long as the program selector is at the **[A]** position.

1. Open the camera menu and point the arrow at SHUTTER.

2. Select the shutter speed you want.

- Press the controller sideways to choose from:

AUTO ← → 1/50 ← → 1/120 ← → 1/250
 ↓ ↑
 1/10000
 ↓ ↑
 1/4000 ← → 1/2000 ← → 1/1000 ← → 1/500

3. Close the menu.

- The selected shutter speed is displayed in the viewfinder. There is no display when the shutter is set to AUTO.

1/250 to 1/1000 second



To record outdoor action on a cloudy day, or for a more stable picture when shooting from a moving car.

1/2000 to 1/10000 second



To record outdoor sports on a clear day so that you can freeze the action clearly. Normal playback will be slightly jumpy, but on a VCR with a noise-free still playback function, you will get clear images which can be analyzed frame by frame.

Which shutter speed?

Select the shutter speed which suits the speed and brightness of the subject:

1/120 second



To reduce the exposure level when shooting very bright scenes, or to give more stable pictures when shooting indoor sports.

Notes:

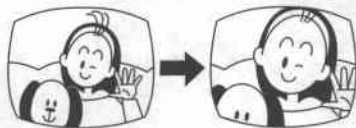
- The higher the shutter speed, the more light you will need.
- Make sure the sun does not appear in the viewfinder when the shutter speed is set to 1/1000 sec or faster.
- The shutter setting is cancelled if you move the program selector from the **[A]** position.

Digital Effects

E

The camera can manipulate the recorded image in a variety of ways. The sound track is not affected.

Close-Up



The Close-Up effect produces an extra 2× magnification. It digitally enlarges the central portion of the image to fill the whole screen.

- With Eye Control, you can enlarge the area inside the Eye Control frame, see p. 59.

Art



Adds a paint-like effect, called solarization, to the image.

16:9



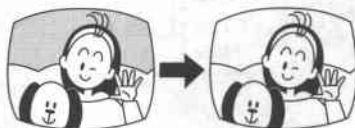
Produces images in the 16:9 format for playback on widescreen TVs.

Mosaic



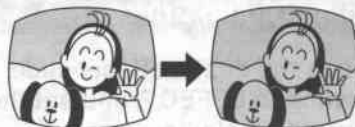
Enlarges various pixels. The image is made up of noticeable squares of colour, giving a mosaic-like effect.

Black & White



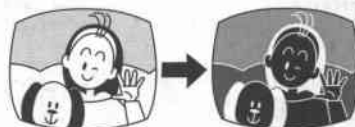
Records the image in black and white.

Sepia



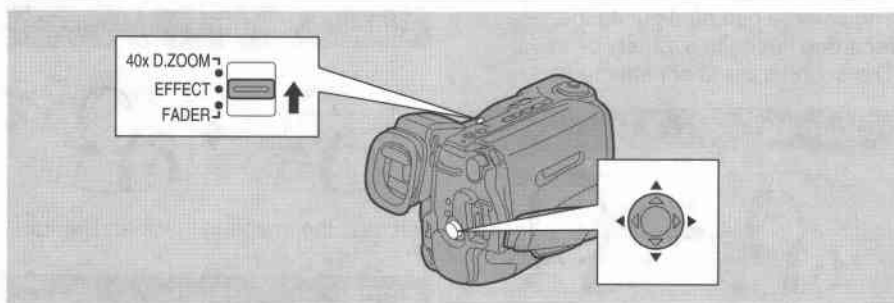
Records a monochrome image with a sepia tint.

Negative-Positive Conversion



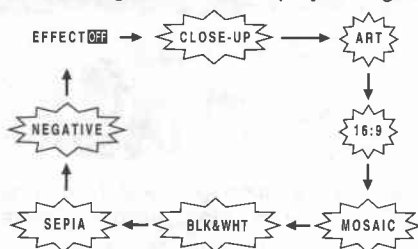
Records a colour negative of the image. White appears as black, yellow appears as blue, green appears as red, etc. Also converts a negative image to an ordinary positive one. This can also be used with the optional accessory FP-100 Film Adapter to transfer 35mm film negatives to the camera.

- Can only be used with the Auto recording program [A].
- You can use exposure adjustment, but you should turn the exposure wheel in the opposite direction. The display will also be opposite.
- You can also adjust the tint and colour.



Using Digital Effects

1. Slide the digital effects slide switch to **EFFECT**, and set the program selector to a recording program.
2. Press the **SELECT** button to choose the effect you want.
 - Each time you press the button, the flashing viewfinder display changes:



3. Press the **ON/OFF** button to activate the effect.
 - The viewfinder display stops flashing and shines continuously.
4. Press the **ON/OFF** button to cancel the effect.
 - The display starts flashing again. You can now select a different effect.
5. Press the **SELECT** button until **EFFECT OFF** is displayed.
 - All digital effects are now OFF.



Digital effects can also be operated with an Eye Control switch. (See p. 61)

Using the Negative-Positive Conversion

The tint and strength of the colours can be altered with the controller.

Tint:

- Press the controller left or right. There are 15 possible settings. When converting a negative image, around setting 5 gives the converted image the most reddish tint, around 10 gives the most bluish tint.

Strength:

- Press the controller up or down. The settings for the overall strength of the colours varies from +5 to -5. Setting -5 gives a black and white image. Use this when converting black & white negatives.
- When you adjust the tint or colour, **M** appears in the viewfinder.
- When you set the Digital Effects OFF the tint and colour will return to a level set automatically by the camcorder and the **M** will disappear from the viewfinder.
- Also, when you change the film you need to return the tint and colour to the automatic levels in the same way.

Note:

- You cannot use digital effects when the program selector is set to the (Easy Recording) program.

Digital Faders

E

Use the digital fader functions to start or end a scene with a fade to or from black.

Horizontal Wipe



When you start recording, the picture begins as a thin horizontal line in the centre of the screen which gradually expands upwards and downwards until it fills the whole screen. When you end a scene, the image is wiped from the top and bottom of the screen.

Vertical Wipe



When you start recording, the picture begins as a thin vertical line in the centre of the screen which gradually expands sideways until it fills the whole of the screen. When you end a scene, the image is wiped from both sides of the screen.

4-Way Wipe

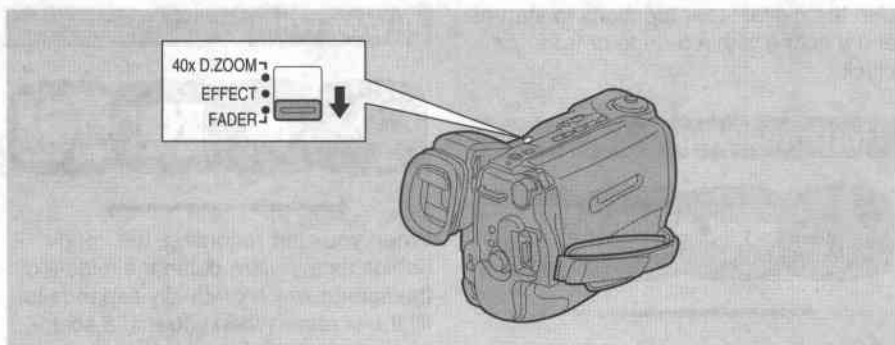


When you start recording, the image begins as a square dot in the middle of the screen which gradually expands to fill the screen. When you end a scene, the image wiped from all 4 sides simultaneously.

Fade Trigger



When you start recording, the scene gradually fades in from a black screen. When you stop recording, it gradually fades out.



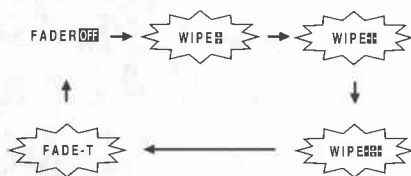
Using digital faders

Activate the function each time you wish to use it: both before you fade in and again before you fade out.

1. Slide the digital effects slide switch to FADER, and set the program selector to a recording program.

2. Press the SELECT button to choose the fade you want.

- Each time you press the button, the flashing viewfinder display changes:



3. Press the ON/OFF button to activate the fade.

- The viewfinder display stops flashing and shines continuously.

4. Start or stop recording.

- The recording will start or stop with the selected fade.
- Sound and image fade together.
- The display will start flashing again. If you wish to use the fade again, press the ON/OFF button again.
- You can turn the selected fade effect off before you use it by pressing the ON/OFF button again.

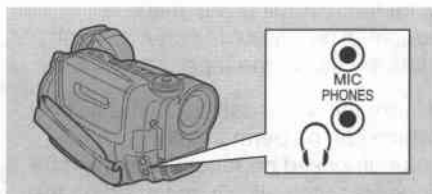


Digital fader functions can also be operated by Eye Control (see p. 61).


Notes:

- Digital faders cannot be used with the Easy Recording program.
- You can preview any of these functions (without actually recording) by removing the tape before you begin.

Headphones and external microphone



For greater creative control over audio recording, you can connect an external microphone to the camera's MIC terminal.

You can monitor the sound while recording by attaching stereo headphones to the camera's  terminal.

Wind screen



► WIND SCREEN • OFF

The camera has an automatic wind screen to prevent wind noise from interfering with the sound track. (It does not operate with an external microphone.) Turn it off when you want the microphone to be as sensitive as possible.

1. Open the recording menu and point the arrow at WIND SCREEN.

2. Select the OFF setting and close the menu.

- WS **OFF** is displayed in the viewfinder.

Unlike a conventional tape counter, which keeps track of the approximate running time of the tape in hours, minutes, and seconds, the Rewritable Consumer Time Code is automatically recorded on the tape, and precisely identifies each individual frame of the recording by hour, minute, second, and frame. This means that the UC-X30Hi is capable of frame-accurate editing.

Time code is recorded continuously when recording is stopped and restarted, as long as there is no blank section between the two sections.

Displaying Time Code

42

1. Open the camera menu, PLAY menu or edit menu and point the arrow at COUNTER.

2. Select the TIME CODE setting and close the menu.

- Tape return and counter reset functions cannot be operated while the time code is displayed.
- The time code display will read “:—:—:—” in the following situations:
 - During playback of a blank section of tape.
 - If the tape was recorded on a camcorder without a time code function.
 - If noise or damage prevents the time code from being read.
 - PCM dubbing or a 8mm VCR may cause the time code from that section of the tape to be erased.

Data Code

A data code, containing the date and time the recording was made is automatically recorded on a special data section of the tape.

Unlike the usual date and time display which can be permanently superimposed on recordings, the date index is automatically recorded on the tape's data area and can be displayed or hidden as desired during playback.

During playback or editing, the date index can be displayed or hidden while the camera is in stop, fast forward, rewind, play or still mode.

Note:

- To avoid accidental recording, make sure that you slide the red switch on the cassette so that it covers the hole (the switch position is usually labelled SAVE or ERASE OFF).

Press the DATE button in the back corner of the left hand side of the camera.

- Press it once to display, once more to hide it.

To set the display style

You can display either the date, the time, or both.

1. Press the DATE button in the back corner of the left hand side of the camera and hold it down for one second.

- A small menu appears. Select the style you want using the controller. Press the DATE button again to close the menu.



Date Search

During playback or editing, you can use data code information to find recordings by date using the DATE SEARCH function.

1. During playback, still playback, or stop, press the DATE SEARCH button.

- In the back corner of the left hand side of the camera.
- "DATE SEARCH" is displayed in the viewfinder.

2. Press FF or REW buttons to begin search.

- Press FF to wind forwards, or REW to wind backwards.
- When the camera detects a new date in the data code information, it starts playback.

Notes:

- The data code will read "— — —" in the following situations:
 - During playback of a blank section of tape.
 - If the tape was recorded before entering the date and time in the camera's memory.
 - If the tape was recorded on a camera without a data code function.
 - If noise or tape damage prevents the data code from being read.
- Data code may not be displayed correctly during record review or record search in reverse.

Notes:

- A date cannot be identified if the total recording time on that day was less than two minutes.
- Date Search playback may start just before or after the beginning of the located section.
- PCM dubbing on an 8mm VCR may cause the date code on that section of the tape to be erased.
- If the data code is not displayed correctly you will not be able to operate the date search correctly.

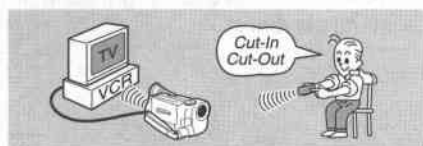
The Auto Editing Function

E

Using the Auto Editing Function is simple. Just watch your original tape and press the FRAME LOCK button (or the EXECUTE button on the wireless controller) at the beginning and the end of each scene you want to record. This creates an editing program. Start the program, and the camcorder automatically records the scenes you selected onto the tape in your VCR. Before you record, you can preview

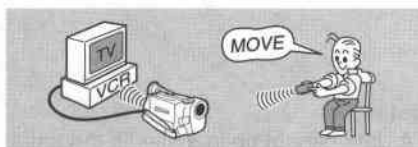
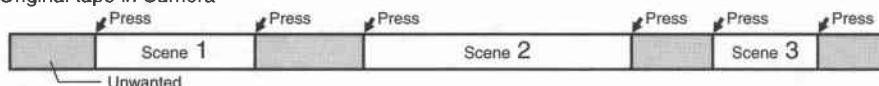
everything (p. 49), change the point a scene begins or ends (p. 54), and even delete (p. 52) or re-order scenes (p. 53).

- You can use either time code or the tape counter to edit a tape. The following procedure is for using time code to edit a tape recorded using the UC-X30Hi.
- When you edit a tape recorded by video equipment utilising time code, we recommend that you use time code for editing.



1. Prepare the camera. Connect the video cables, and place it so that it can control your VCR by remote control.
2. Watch the video. When a part you want to keep starts, press the EXECUTE button on the wireless controller. (Or the FRAME LOCK button on the camera body.) Press the button again at the end of the part you want to keep. You can choose up to eight scenes this way.

Original tape in Camera



3. If you wish, preview the video. You can also re-order scenes, change the time they start and finish, or even delete them.

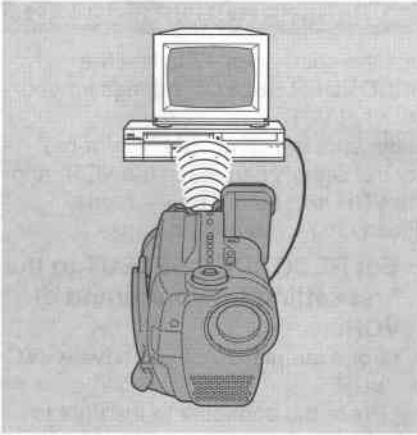
- To select a function, a scene, or a time, or to move a scene, use the controller. To activate a function use the EXECUTE button (or the FRAME LOCK button.)



4. When everything is perfect, automatically record it to the VCR. Choose START in the menu, then press the EXECUTE button (or the FRAME LOCK button.)

Final tape in VCR





The UC-X30Hi's Auto Editing Function enables you to smoothly rerecord scenes from an original tape in any order. You can then view the entire finished product and make all the fine adjustments you want before the final recording. It is easy to reorder or re-adjust scenes, to make your videos perfect.

1. Connect the camera to the VCR.

- See the "Playback Connection" instructions on page 17.

2. Turn the TV on.

- Be sure to set it to the video channel, or set the TV/Video selector to Video.

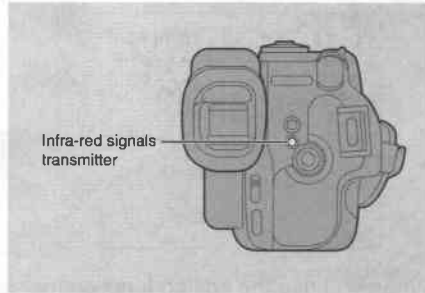
3. Turn on the VCR and load a blank cassette.

- See your VCR instruction manual.

4. Turn the camera's program selector to EDIT.

- When you set the program selector to EDIT, all viewfinder displays are also displayed on the screen of the TV attached to your VCR. However, these displays will not be recorded onto the tape in the VCR.

5. Set the counter display to TIME CODE.



Setting the Camera to Control your VCR

The camcorder's Auto Editing Function controls your VCR by using the same infra-red signals as the VCR's remote control.

Make sure the camera is in a spot where it can remotely control your VCR.

1. Check where the remote control sensor is on your VCR using its normal remote control.

2. Place the camera pointing directly at the sensor, not more 50cm away.

- Check that the sensor will pick up signals easily from this spot using the VCR's normal remote control.
- Make sure that the cables and the camera strap do not obstruct the signals.

3. Make sure that the VCR is in record-pause mode.

4. Make sure that all the other video equipments are turned off to avoid accidental recording.

```
<MENU>
C.SELECT...COUNTER
DUB.MODE.....OFF
SENSOR.....ON
▶RECORDER SELECT.1-A
CUT-IN ADJUST..0.0
CUT-OUT ADJUST..0.0
```

When you use the editing function for the first time, or with a different VCR, you should set your camcorder to send the correct remote control signals to your VCR.

The camera will not forget this setting unless you change it. Do not alter it again unless you change VCR.

Preparations & Setting Up

1. Make sure that the camera and VCR are set up as in "Preparations," p. 45 and "Setting up your camera to control your VCR," p. 45.

2. Open the edit menu and point the arrow to RECORDER SELECT.

- It is easiest to view the menu on the TV screen.

Setting RECORDER SELECT

Use the chart on p. 47 to find the RECORDER SELECT settings for your brand of VCR.

Make sure the camcorder's infra-red control signals can reach the VCR, and the VCR is in record pause mode. (Ready to record and on pause.)

1. Set RECORDER SELECT to the first setting for your brand of VCR.

- For example, 7-A if you have a JVC VCR.
- Press the controller to the right to change the setting.

2. If the setting is correct, the VCR will start recording automatically.

- As long as the camera is pointing at the VCR's remote sensor while you change the setting.

3. If the VCR does not start recording, try the next setting.

- Press the controller sideways (to 7-B in the above example).
- Try each setting in turn until the VCR starts to record.

4. Once the VCR starts to record, check that the setting is right. Put the VCR on record-pause again, then press the camera's FRAME LOCK button.

- The VCR should start to record for a few seconds, and REC appear in the viewfinder and on the TV screen. Then it will automatically pause and REC PAUSE appear in the viewfinder and on screen.
- If not, then the setting is still not right. Try the next setting.

RECORDER SELECT

The camera's Auto Editing Function can remotely control almost all brands and models of VCR. VCR remote control signals vary depending on model and brand. First, choose the right RECORDER SELECT setting for your VCR. The number indicates the VCR brand. The letter indicates the set of signals.

Brand	Settings	Brand	Settings
Canon	1-A to 1-B	Toshiba	15-A to 15-B
Aiwa	2-A to 2-C	GE	16-A to 16-B
Akai	3-A to 3-C	RCA	
Fujitsu	4	Magnavox	17-A to 17-B
Funai	5	Philips	18-A to 18-D
Hitachi	6-A to 6-B	Selecó	
JVC	7-A to 7-C	Rex	
Mitsubishi	8-A to 8-D	Thomson	
NEC	9-A to 9-D	Saba	
Panasonic	10-A to 10-F	Nordmende	
Blaupunkt		Ferguson	19-A to 19-C
Quasar		Grundig	20-A to 20-D
Pioneer	11	Nokia	21-A to 21-C
Sanyo	12-A to 12-D	Telefunken	22-A to 22-B
Fisher		Zenith	23
Sharp	13-A to 13-C	Samsung	24-A to 24-B
Sony	14-A to 14-C	Gold Star	25

as of Aug 1996

Notes:

- If your brand of VCR is not on the chart or you cannot find the correct setting, hold the controller down to the right until the VCR starts to record. This way you can try all possible settings in about 80 seconds.
- Once you find the correct setting, remember this and do not change it unless you change VCR.
- See p. 50 for details of the "cut-in" and "cut-out" adjustments.
- If you try all the numbers and letters, but the VCR has still not started to record:
 - Check the VCR is ready to record, and on pause.
 - Check the VCR can receive signals from where the camera is, and that nothing is blocking the signals.
 - Go back and try to set it again.
 - It is unlikely, but you may have a VCR the Auto Editing Function cannot control. If so use the Simple Editing method on p. 55.

Choosing a scene (SET function)

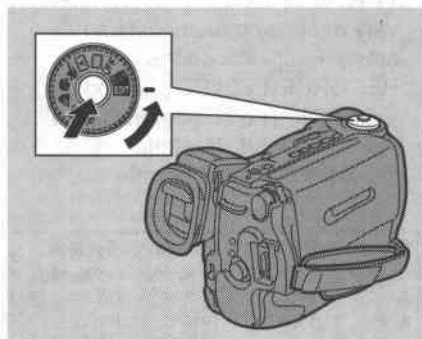
Choosing a scene (SET function)

You can put a scene into the editing program by pressing the FRAME LOCK button at the point where you want the scene to start and at the point where you want it to end. (The “cut-in” and the “cut-out” points.)

Instead of using the controls on the camcorder body, you can use the wireless controller. The EXECUTE button corresponds to the FRAME LOCK button. The four arrows correspond to the controller.

1. **Make sure the program selector is set to EDIT.**
2. **Make sure that the SET function at the bottom of the screen is highlighted.**
 - If it is not, move the arrow down the screen with the controller to the bottom line. Then press the controller sideways to change the highlighted function.
3. **Start the tape with the “PLAY” button: ►.**
 - You can use the ►, ◀◀, ▶▶, II, and ■ buttons or special playbacks in the same way as in playback mode.
4. **At the start of a scene you want to record, press the FRAME LOCK button.**
5. **Press it again at the end of the scene.**
 - The beginning and end of the scene according to the counter (the “cut-in” and “cut-out” points) are displayed on the screen.
 - The camera will not let you put in a “cut-in” point later than its “cut-out” point, nor a “cut-out” point earlier than its “cut-in” point.
 - You will not be able to make scenes shorter than about two seconds in length.

6. **You can program the Auto Editing Function to remember up to 8 different scenes in the same way.**

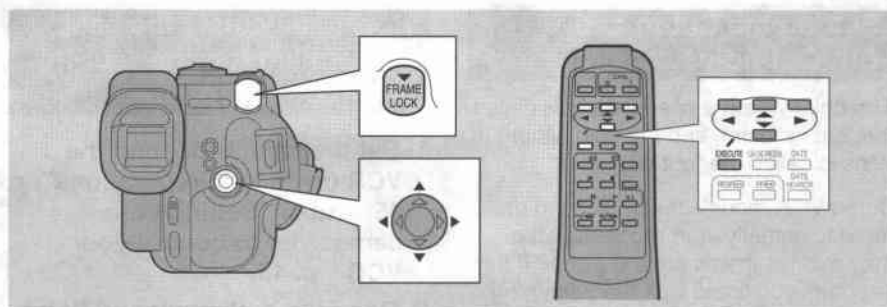


TOTAL / 0:43:56 0:10:42:14			
CUT-IN		CUT-OUT	
0:24:26	24	0:45:10	13
0:47:54	23	0:55:37	10
0:01:02	15	0:13:12	03
0:05:00	22	0:08:24	01

► SET DELETE PREVIEW START CLEAR

Note:

- **TOTAL** at the top of the menu tells you the total running time of all the scenes you have selected. For best results, when editing from the start of the tape, let the tape run for about 20 seconds according to the counter. Set the first cut-in point after that. Also, avoid setting the last cut-out point in the last ten seconds of the tape.



TOTAL / 0:43:56 0:10:42:14
 CUT-IN CUT-OUT
 0:24:28:24 → 0:45:10:13
 0:47:54:23 → 0:55:37:10
 0:01:02:15 → 0:13:12:03
 0:05:00:22 → 0:08:24:01

▶ SET DELETE **PREVIEW** START CLEAR

TOTAL / 0:43:56 0:10:42:14
 CUT-IN CUT-OUT
 ▶ 0:24:28:24 → 0:45:10:13
 0:47:54:23 → 0:55:37:10
 0:01:02:15 → 0:13:12:03
 0:05:00:22 → 0:08:24:01

SET DELETE PREVIEW **START** CLEAR

Preview function

You can preview the editing program. The PREVIEW function plays the whole program, automatically pausing at the "cut-in" and "cut-out" of each scene to help editing.

1. Use the controller to move down the screen to the bottom line, and then across to the PREVIEW function.
2. Press the FRAME LOCK button.

- The camera will now play all the scenes in the order you have programmed them.
- In PREVIEW mode the tape starts a little before each "cut-in" point. It will pause for 2 seconds precisely at the "cut-in" point. It pauses again at the "cut-out" point.

Running the editing program (START function)

1. Make sure the VCR is ready to record and on pause.
2. Use the controller to move down the screen to the bottom line, and then across to the START function.
3. The editing program starts when you press the FRAME LOCK button.
 - The camera automatically records the scenes you selected onto the tape in the VCR.

Setting the Cut-In and Cut-Out Adjustments

The point where a scene starts is called the "cut-in" point, and the point where it ends is called the "cut-out" point.

Some VCR models take a second or more to actually start recording after they receive the command signal. If this happens you could lose the beginning of the scene. CUT-IN ADJUST prevents this by sending the command a little early.

Similarly, some models take some time to react to the command to stop recording. Some models also rewind slightly after they stop. You could therefore record more than you wanted, or lose the end of the scene. CUT-OUT ADJUST prevents this, by sending the command a little early or late.

If you have these problems with your VCR, reset these adjustments.

Use the EDIT menu to set the "cut-in" and "cut-out" adjustments.

50

Editing



▶ CUT-IN ADJUST...-1.5
CUT-OUT ADJUST...+0.8

1. Open the editing menu and point the arrow at CUT-IN ADJUST.

- Point it at "CUT-OUT ADJUST" to set the cut out adjustment.

2. Adjust the setting.

- CUT-IN ADJUST can be set up to 5 seconds early. (-5.0)
- CUT-OUT ADJUST can be set from one second early to five seconds late. (-1.0 to +5.0)
- This can be set to an accuracy of one-tenth of a second.

How to calculate the best adjustment for the "cut-in" and "cut-out" points

1. Set the camcorder and the VCR up as in "Preparations", p. 45, and in "Setting your camcorder to control your VCR", p. 45.

2. Open the edit menu and point the arrow at RECORDER SELECT.

- Make sure the setting is right for your VCR. If you are not sure, see pp. 46-47.

3. Press the FRAME LOCK button.

- The VCR records the menu screen for 10 seconds, then pauses.
- As it does, the words "CUT-OUT" are displayed at the bottom of the screen. Next to this there is a digital timer, accurate to one-tenth of a second. The timer counts down from +5.0 to -1.0 seconds. At precisely 0.0 seconds, the camera sends the message to pause.

4. Wait for a few moments.

- The VCR starts to record again, then stops.
- This time, the words "CUT-IN" and a timer are displayed at the bottom of the screen. The timer counts from 0.0 to -5.0 after the camera sends the message to start recording.

5. Repeat steps 4 and 5 at least twice more.

- This way you should have at least three recordings of the CUT-IN and CUT-OUT timers.

6. Rewind the VCR tape and play back the recordings of the menu and the timers.

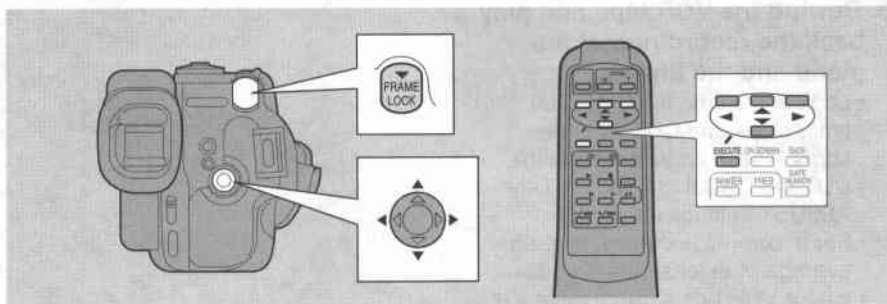
- Look at the time the CUT-OUT timer stops and CUT-IN timer starts. These times are what the CUT-OUT ADJUST and CUT-IN ADJUST settings should be.
- For maximum accuracy, take an average of at least three readings.
- If your VCR has a frame advance function or a jog dial, use it to find the precise starting times most conveniently.

7. Set the CUT-OUT ADJUST and CUT-IN ADJUST settings to the average of the three readings.

- see p. 54.

Note:

The camcorder will remember the cut-in and cut-out adjustment settings until you change them.



Clearing the whole display (CLEAR function)

```
TOTAL / 0:43:56 0:10:42:14
CUT-IN  CUT-OUT
0:24:28:24 → 0:45:10:13
0:47:54:23 → 0:55:37:10
0:01:02:15 → 0:13:12:03
0:05:00:22 → 0:08:24:01
```

▶SET DELETE PREVIEW START **CLEAR**

This deletes the whole program.

1. Use the controller to move down the screen to the bottom line, and then across to the **CLEAR** function.

2. Press the **FRAME LOCK** button.

- All the lines are now blank. All data is deleted.
- Please do not do this by mistake, or you will have to start again from the beginning.

Deleting a scene (DELETE function)

```
TOTAL / 0:43:56 0:10:42:14
CUT-IN  CUT-OUT
0:24:28:24 → 0:45:10:13
▶0:47:54:23 → 0:55:37:10
0:01:02:15 → 0:13:12:03
0:05:00:22 → 0:08:24:01
```

▶SET **DELETE** PREVIEW START CLEAR

You can delete a scene from the program.

1. Use the controller to move down the screen to the bottom line, and then across to the **DELETE** function.
2. Use the controller to move directly up the screen to highlight the scene you want to delete.

- Push the controller straight up.

3. Press the **FRAME LOCK** button.

- The scene is deleted and that line is now blank.
- You can insert a new scene here if you wish, using the SET function as described in "Choosing a scene" above.
- If this line is left blank, this will not affect the rest of the recording, and the next scene will smoothly follow the previous one.

Reordering Scenes

E

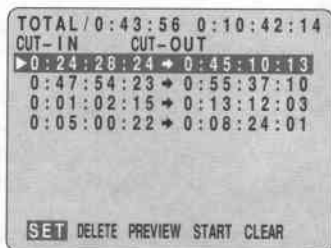
You can move the scenes around and reorder them.

1. Make sure the SET function at the bottom of the screen is highlighted.

- If not, use the controller to move down the screen and then across to SET.

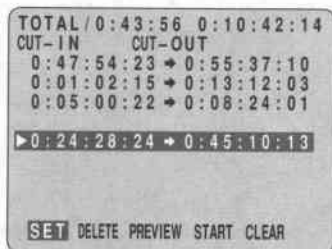
2. Move up or down the screen with the controller to the scene you want to move.

3. Move the controller to the left once to highlight the entire line.



4. Move the controller up or down to where you want it.

- The line of data moves with it.



5. Repeat as necessary with the other scenes until the program is ordered as you want it.

**Changing the point where a scene starts or ends.
("cut in" / "cut out" point.)**

1. Make sure the SET function at the bottom of the screen is highlighted.

- If not, use the controller to move down the screen and then across to SET.

2. Move up or down the screen with the controller to the scene you want to alter.

3. Move the controller to the left or right until the time you wish to change is highlighted.

- Move it to the right once, and the "cut-in" point is highlighted.

▶ 0:24:28:24 → 0:45:10:13

- Move it to the right again, and the "cut-out" point is highlighted.

▶ 0:24:28:24 → 0:45:10:13

- Move it to the right once more, and the whole line is highlighted. Use this if you want to move the line, without changing the times (see "Reordering Scenes" above.)

▶ 0:24:28:24 → 0:45:10:13

- Move it to the right again, and none of the line is highlighted.
- Move the controller to the left to go through the same sequence in reverse order.

4. Use the playback keys as normal to operate and play the tape again. (First rewind or fast forward if necessary.)

5. Press the FRAME LOCK button to indicate where you now want the scene to start or end.

- This position according to the counter will be displayed in the viewfinder.

Simple Editing to a VCR

E

If you cannot find the appropriate remote control setting for the camcorder to control your VCR, you still can edit a tape to the VCR as follows.

Preparations



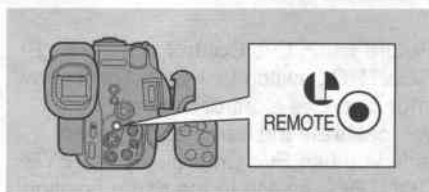
▶ DUB. MODE ON


1. **Connect the camera to the VCR.**
 - See "Playback Connection" on p. 17.
2. **Prepare the TV and VCR.**
 - Turn on the TV and set it to the video channel, or set the TV/VIDEO selector to VIDEO.
 - Turn on the VCR, and set its input selector to LINE. Load a blank cassette, and put the VCR in record pause mode.
 - See your TV and VCR instruction manuals for details.
3. **Set the camera's program selector to PLAY, and load your recorded cassette.**
4. **Open the playback menu and point the arrow at DUB. MODE.**
5. **Select the ON setting and close the menu.**

Basic editing



1. **Find a point on your recorded cassette slightly ahead of the section you want to copy.**
2. **Start to play it back while you monitor the picture on the TV.**
3. **Start recording on the VCR as soon as the section you want to copy appears on the screen.**
4. **Pause the VCR at the end of the section you want to copy, then stop playback on the camera.**
5. **Repeat steps 1 to 4 until your edited recording is complete.**

REMOTE terminal



The  REMOTE terminal allows you to connect the camera to equipment such as the VE-100 Video Editor (p. 67). Some buttons on other editing equipment may operate differently from those on the camera.

Notes:

-  (LANC) is a trademark. It stands for Local Application Control Bus System.
- We cannot guarantee the results when connecting to equipment not bearing the LANC .

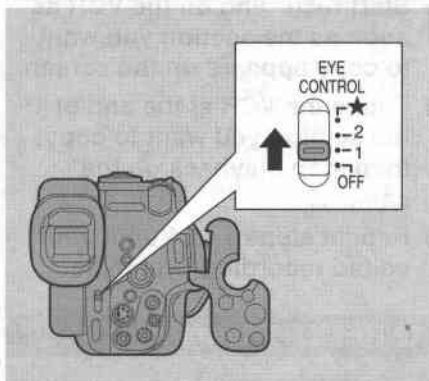
Before You Use Eye Control

E

Before using Eye Control, you must set the EYE CONTROL switch.

The first time you use Eye Control, you must also calibrate the camera.

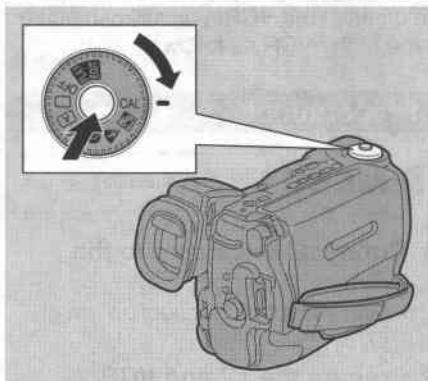
Setting the EYE CONTROL switch



Before using Eye Control, set the EYE CONTROL switch to 1 or 2. This is now your own Eye Control number. When you calibrate the camera, and every time you use Eye Control, set the EYE CONTROL switch to the same position. Nobody else should use the camera with the switch at your setting.

- For people who will not use the camera very often, set the EYE CONTROL switch to ★, the guest position. Each time the camera is calibrated at the ★ setting, it cancels the previous ★ calibration automatically.

Calibration



As different people have different eye characteristics, the camera has to learn about your eyes before it can interpret their movements accurately. The process of teaching the camera about your eyes is called calibration. You can calibrate the camera as often as you like. The more often you do so, the more accurate it will become.

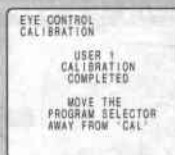
The camera itself will guide you through the calibration procedure, but you should also read the instructions below for more detailed information.

1. Set the program selector to CAL.

- The calibration display appears in the viewfinder.

2. Set the EYE CONTROL switch to 1 (or 2).

- See "Setting the EYE CONTROL switch," on this page.



Instructions in the viewfinder guide you through the calibration procedure.

3. Put your eye to the viewfinder.

- Do not move your eye away from the viewfinder during calibration.

4. Press the start/stop button to start calibration.

- If you press the C. RESET button instead, all the previous calibration information for position 1 (or 2) will be erased.
- This step is not necessary if you use the ★ setting.

5. Look at the yellow dot, and press the start/stop button again.

- Keep looking until it stops flashing.
- If TRY AGAIN flashes in the viewfinder, you will have to start again.

6. Look at the next yellow dot and press the start/stop button one more time.

- Keep looking until it stops flashing.
- If TRY AGAIN flashes in the viewfinder, you will have to start again.

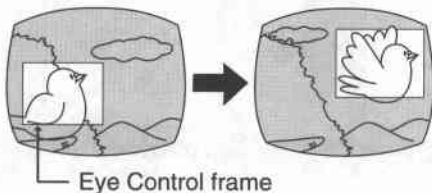
7. Set the program selector to one of the recording programs.

- You are now ready to use Eye Control.

Notes:

- If Eye Control does not seem to be working well, try calibrating the camera again (without canceling your previous calibration). Refer to "Troubleshooting" on p. 71 for more information.
- If you sometimes wear glasses, you might want to use both positions 1 and 2 yourself. Use one position when you are wearing glasses, and the other when you are not wearing them.

Using the Eye Control frame



The camera can tell which part of the viewfinder screen you are looking at. This means it can automatically adjust the focus to suit the important part of the scene.

The Eye Control frame follows your eye around the viewfinder, and the camera adjusts the focus to suit whatever is inside the frame. It also measures the brightness of the frame area in order to calculate the exposure more precisely.

Be sure to calibrate the camera before using Eye Control for the first time (see p. 56).

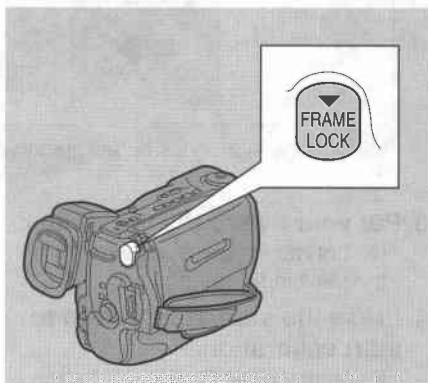
1. Set the EYE CONTROL switch.

- See p. 60.
- The Eye Control frame appears in the viewfinder.

2. Look at the subject in the viewfinder.

- The frame follows your eye and positions itself over the subject. The camera adjusts the focus to suit the area inside the frame.

Frame lock



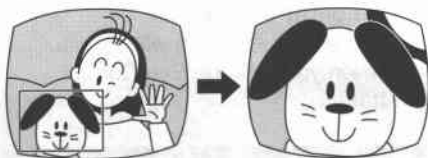
When you have positioned the Eye Control frame by looking at your subject, you can lock the frame at this point by pressing the FRAME LOCK button.

This is useful for two reasons:

- If your subject is stationary, you do not have to keep looking at it.
- You can now operate other eye-controlled functions (see p. 60).

Press the button again to unlock the frame.

Eye-controlled Close-up



When you are using eye-controlled focus, the Close-up digital effect (p. 37) will magnify the area around the frame, instead of the center of the image.

To hide the Eye Control frame



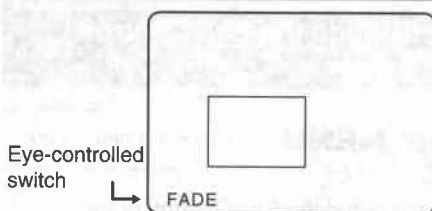
▶ AF FRAME...OFF

If you find the Eye Control frame unnecessary or distracting, you can make it invisible. Eye-controlled focus will continue to operate as before, but you will not see the frame.

1. Open the camera menu and point the arrow at **AF FRAME**.
2. Select the **OFF** setting and close the menu.

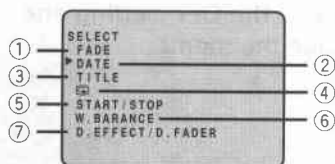
Note:

- If you take your eye away from the viewfinder, the frame returns to the center of the screen (unless you are using frame lock).



When you lock the Eye Control frame by pressing the FRAME LOCK button (p. 58), an eye-controlled switch appears in the viewfinder.

Choosing a switch



The following functions can be controlled using eye-controlled switches:

- ① Fade p. 39
- ② Date/time p. 24
- ③ Title p. 27
- ④ Record review (☐) p. 30
- ⑤ Record start/stop p. 6
- ⑥ White balance p. 35
- ⑦ Digital effects and fader functions p. 37, 39

Only one of these functions is available at a time. To choose the one you want to use:

1. Press and hold the FRAME LOCK button.

- After three seconds, the list of switches appears in the viewfinder. The arrow moves down the list one by one.

2. Release the button when the arrow is pointing at the switch you want to use.

- The selected switch will appear when you lock the Eye Control frame.

Operating the switches

When your chosen switch appears in the viewfinder, you can operate it simply by looking at it. The switch flashes to show that the camera has understood your command.

Eye-controlled fade

Keep looking at FADE until the picture fades out. Look away from it to fade in.

Unlike the Fade Trigger effect, eye-controlled fade can be operated at any time, not just at the beginning and end of a scene.

Date and time display

Look at DATE to turn the date and/or time display on or off.

Title display

Look at TITLE to turn the title display on or off.

Record review

Pause recording and look at ☐ to operate record review.

Recording start/stop

Look at START/STOP to start or stop recording.

White balance

Look at WB SET to set the white balance. Look at it again to return to auto white balance.

Either AUTO or SET is highlighted to show whether auto or manual white balance is selected.

Digital effects and fader functions

The name of the currently selected effect or fader function appears in the viewfinder. Look at it to activate it.

To turn off the switches



▶ EYE SWITCH .. OFF

You can turn off the eye-controlled switches if you do not want a switch to appear whenever you use frame lock.

1. Open the camera menu and point the arrow at EYE SWITCH.

2. Select the OFF setting and close the menu.

- * Now the eye-controlled switches cannot be used.
- When you lock the Eye Control frame, FRAME LOCK will appear in the viewfinder.

Notes:

- The switches are normally yellow, but appear black when the selected function is not available.
- The camera remembers which switch you selected, but it does not automatically return to the switch screen the next time you turn it on. It always begins with the Eye Control frame.
- You cannot use the following controls while an eye-controlled switch is displayed:
 - Autofocus on/off
 - Exposure lock and adjustment
 - Digital effects and fader functions

Holding the camera



For maximum stability, place your right hand through the grip belt and keep your right elbow pressed against your body. Rest your left hand lightly on the side of the camera. With practice, you will be able to operate the controls by touch, without taking your eye off the action.

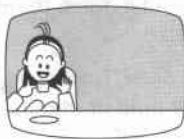
Using a tripod



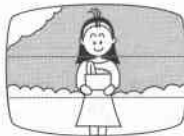
To prevent any unwanted movement, you can mount the camera on a tripod, and operate it with the wireless controller.

- When you are using a tripod, be careful not to leave the viewfinder exposed to bright sunlight or it may melt. (The light is concentrated by the viewfinder lens.)
- Make sure that the fastening screw of the tripod is no longer than 5.5 mm, or it will damage the camera.

Composition



The most important element in the scene does not have to be in the center. For a more interesting picture, try to position your subject so it is slightly to one side. Leave some space on the side of the frame that the subject is facing or moving towards.



Don't cut off the top of the subject's head, and don't cut people off at the neck, hips or knees (move a little bit above or below).



Watch out for distracting objects in the background.

Picture angle



Long shot



Medium shot

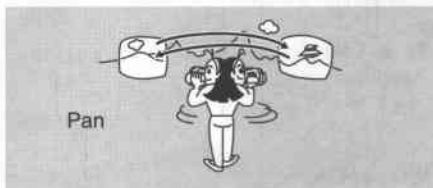


Close-up

Instead of zooming while recording, try to choose your picture angle before you begin. A good way to tell a story with video is to begin with a long shot that establishes the situation, and then move in with medium shots and close-ups to show the details. Remember to change your viewpoint for each shot.

Remember that any camera movement or change in picture angle should have a definite purpose. Avoid unnecessary or half-hearted movements.

Camera moves



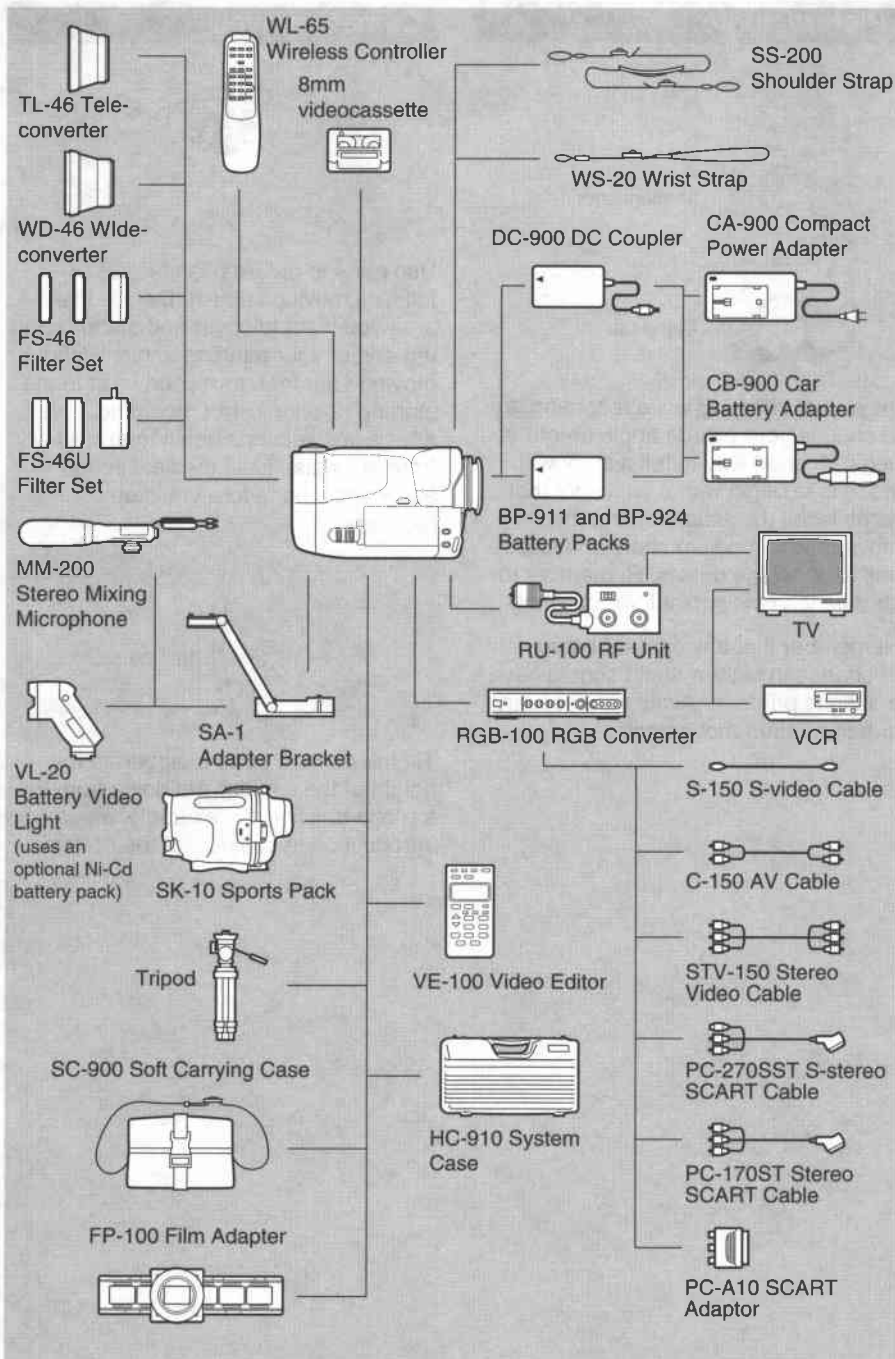
Use pans to record a landscape or follow a moving subject. Decide the area you want to cover and stand facing the end of your panning angle. Without moving your feet, turn your waist to the starting position. Start recording, and after a few seconds begin to turn slowly from the waist. Hold the final image for a few seconds before you stop recording.



Tilt the camera up to exaggerate the height of the subject. Tilt down from the top of a building, for example, as an introduction to subjects at the bottom.

Video System

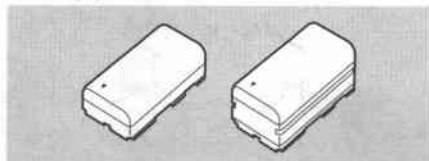
• Availability differs from area to area **E**



Optional Accessories

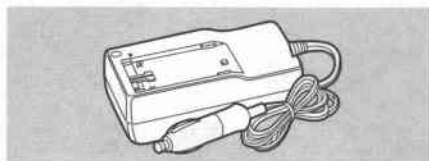
E

Battery packs



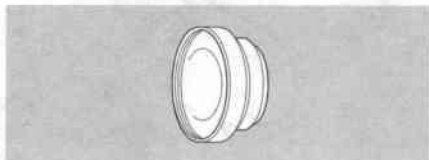
The BP-911 is supplied as standard. For longer recordings, your camera can also be powered by the high-capacity BP-924.

CB-900 Car Battery Adapter



Power your camera, or recharge battery packs on the move. The car battery adapter plugs into your car's cigarette lighter socket and runs off a 12-24 V DC negative ground battery.

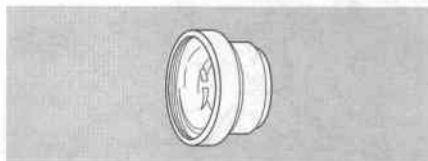
TL-46 Tele-converter



This tele-converter lens increases the focal length of the camera lens by a factor of 1.4. The zoom and autofocus operate as usual, so you can take full advantage of the extra range.

- The image stabilizer is not as effective as usual when the tele-converter is attached.

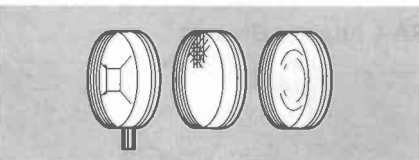
WD-46 Wide-converter



This lens decreases focal length by a factor of 0.7, giving you a wide perspective for indoor shots or panoramic views - and you can still use both zoom and autofocus.

- If you have a 'professional-type' monitor, there may be some vignetting.

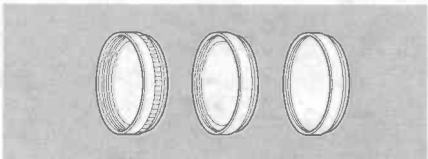
FS-46 Filter Set



Three special effects filters to add a creative touch to your recordings: multiple-image, R-cross and zoom-spot.

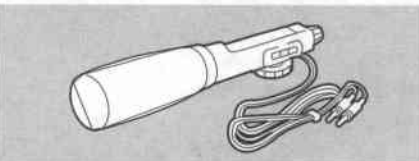
- Focus manually when using special effects filters.

FS-46U Filter Set



Ultraviolet, neutral density and circular polarizing filters to help you take control of difficult lighting conditions.

MM-200 Stereo Mixing Microphone



The MM-200 mixes live sound and music, so you can create the ideal sound track for your video productions.

- The sound and DC cables can be separated from each other at any point along their length.

VL-20 Battery Video Light

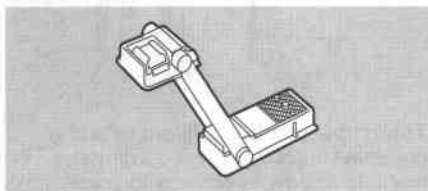


This compact yet powerful video light can be used for both indoor and outdoor shooting.

There are no cables — an optional Ni-Cd battery pack fits neatly inside.

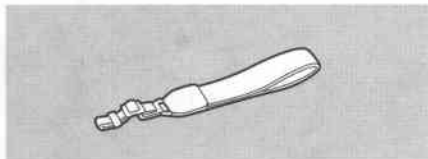
- The VL-20 uses BP-711, BP-E722 or BP-729 Ni-Cd battery packs. To charge them, you will need an optional adapter, such as the CA-R200 or CA-R300.

SA-1 Adapter Bracket



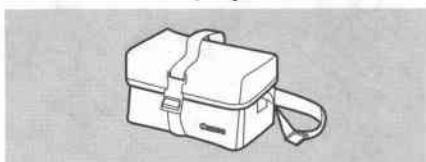
Attaches a video light or microphone securely to the camera.

WS-20 Wrist Strap



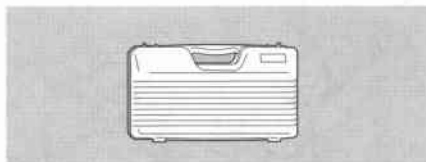
Provides an extra measure of protection for active shooting.

SC-900 Soft Carrying Case



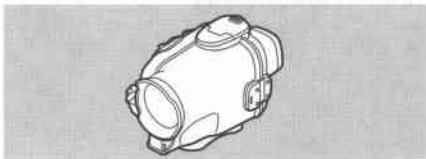
This lightweight bag keeps the camera within easy reach without weighing you down or getting in the way.

HC-910 System Case



This solid, lockable case provides safe and stylish protection for the camera and accessories during transportation and storage.

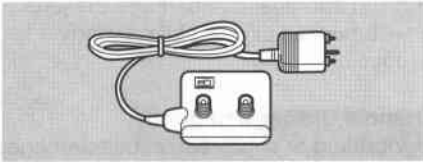
SK-10 Sports Pack



Completely waterproof your camera, while retaining control of its important functions. You can freely record active holidays at the beach, or on the ski slopes.

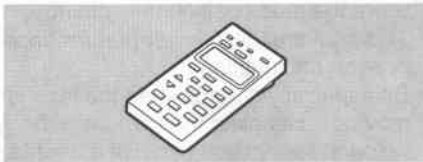
- The sports pack can be used underwater at depths of up to 3 metres. For safety reasons, it is designed to float, so it is best used close to the surface.
- When installing the UC-X30Hi in the sports pack, use mounting plate B, and guide mark 3.


RU-100 RF Unit



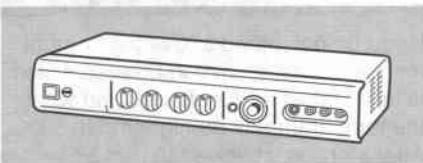
This optional converter allows the camera to be connected to the antenna terminal of any TV. It can be a useful accessory while traveling, as you may need it if you want to connect the camera to a TV in your hotel room.

VE-100 Video Editor



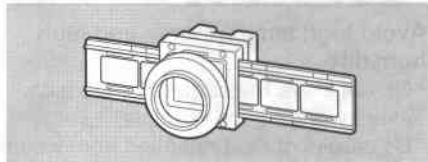
This easy-to-use editor controls the camera and a video recorder simultaneously for fast, accurate assembly editing. Not only does it link up to any  (LANC) terminal, it can also learn the remote control signals used by most VCRs.

RGB-100 RGB Converter



Even without an S-video input, you can appreciate the difference Hi8 makes — the RGB-100 converts the camera's S-video signal to RGB, and links up with your TV's SCART terminal.

FP-100 Film Adapter



Use with your camcorder to record films and slides on video, load to an AV-compatible PC, or display on TV.



This mark identifies genuine Canon 8mm video accessories. When you use Canon video equipment, we recommend Canon-brand accessories or products bearing the same mark.

Cautions

Avoid high temperatures and high humidity.

- Do not leave the camera inside a car in hot weather, for example.
- Be careful of heat radiating from video lighting equipment.
- Do not take the camera into a humid room.

Avoid sudden changes in temperature.

- If you take the camera from a cold place to a warm place, condensation may form on the lens and internal parts (see p. 70).

Do not point the lens or viewfinder at strong light sources.

- Never point it at the sun, and do not leave it aimed at a bright subject.
- Be especially careful when leaving the camera on a tripod.

Avoid magnetic or electric fields.

- Do not use the camera close to TV transmitters, portable communication devices or other sources of electric or magnetic radiation. They may cause picture interference, or permanently damage the camera.

Do not expose the camera to water.

- Cover the camera when you are recording in rain or mist.
- There is a risk of electric shock if water gets inside the camera — contact qualified service personnel as soon as possible.

Protect the lens.

- Sand and dust can damage the lens — be especially careful on windy days.

Handle the camera gently.

- Vibration or shock can cause damage.
- Do not use the viewfinder as a carrying handle.

Keep the camera the right way up.

- Try to keep your camcorder the right way up and horizontal during use. When a cassette is loaded, if you lay the camcorder on its side or upside down the tape position may change. This could result in lower performance or even malfunction.
- Be especially careful when the tape is moving — Handling the camera with respect, so that you can use it trouble free.

Do not disassemble the camera.

- This is very dangerous as there is a risk of electric shock — if the camera does not function properly, take it to qualified service personnel.

Storage

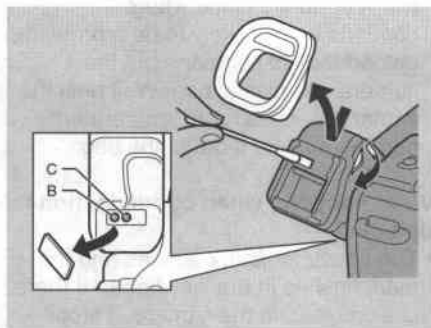
If you do not intend to use the camera for some time, store it in an area which is free of dust and moisture, and where the temperature is no higher than 30°C. After storage, check each part and function of your camera to make sure everything is still working properly.

Note:

- These cautions also apply to accessories such as battery packs and cassettes.

Maintenance

Viewfinder



- The viewfinder picture can be adjusted when necessary by peeling off the cover on the side of the viewfinder, and turning the screws marked B (brightness), and C (colour) .
- Clean the viewfinder screen using a blower brush or a dry cotton swab.

Camera body and lens

- Use a soft, dry cloth to clean the camera body or lens. Never use chemically treated cloth or volatile solvents such as paint thinner.

Video heads

- Clean the video heads only when necessary, preferably using Canon's CC-8 Video Head Cleaning Cassette.
- Do not use a wet-type cleaning cassette, as this can cause damage.

Using the camera abroad

Power sources

- You can use the compact power adapter to operate your camera and charge battery packs in any country where the electricity supply is between 110 and 240 V AC, 50/60 Hz. Contact your Canon dealer for information about plug adapters for overseas use.

TV playback

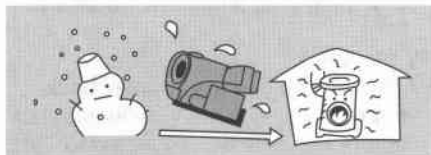
- Although you can always play back your recordings in the viewfinder, your camera can only be connected to TVs which use its PAL system. This TV system is used in the following countries:

Algeria, Australia, Austria, Bangladesh, Belgium, Brunei, China, Denmark, Finland, Germany, Hong Kong, Iceland, India, Indonesia, Ireland, Italy, Jordan, Kenya, Kuwait, Liberia, Malaysia, Malta, Mozambique, the Netherlands, New Zealand, North Korea, Norway, Oman, Pakistan, Portugal, Qatar, Sierra Leone, Singapore, South Africa, Spain, Sri Lanka, Swaziland, Sweden, Switzerland, Tanzania, Thailand, Turkey, Uganda, United Arab Emirates, United Kingdom, Yemen, former Yugoslavia, Zambia.

Condensation

Condensation may form on the camera when it is moved from a cold place to a warm place. Using the camera while condensation is present can damage both the tape and the camera.

Condensation may become a problem:



When you bring the camera from a cold place to a warm room



When a cold room is heated rapidly



When the camera is left in a humid room




When the camera is taken from an air-conditioned room to a warm, humid place

Protecting the camera from condensation

- Before you bring the camera to a warm or humid place where condensation is likely to be a problem, unload the cassette and put the camera in a plastic bag. Wait until the camera reaches room temperature before you take it out of the bag.

What happens when condensation is detected

- The power indicator flashes and the  mark flashes in the viewfinder. If there is a cassette in the camera, it stops automatically and EJECT flashes in the viewfinder.
- The camera may not detect the condensation immediately — the condensation warning may not start flashing for 10 to 15 minutes.
- You cannot load a cassette when condensation is detected.

What you should do

- Remove the cassette, leave the cassette compartment open, and turn the camera off.
- Leave it in a dry place until the condensation evaporates. After the condensation warning stops flashing, wait at least another hour before trying to use the camera.



Refer to this checklist first if you have any problems with your camera. Possible explanations are given below each problem on the list — turn to the page numbers in brackets for more information.

Make sure that the camera is properly connected if you are using it with a TV or VCR. Consult your dealer or service outlet if problems persist.

❑ The camera won't turn on.

- The battery pack is exhausted, or not properly attached (p. 9).

❑ The power indicator is flashing.

- Check the viewfinder displays (p. 75).

❑ The start/stop button doesn't work.

- You haven't selected a recording program (p. 31).
- You haven't loaded a cassette, or it is set for erasure prevention (p. 12, 29).

❑ Nothing happens when I press the buttons.

- You haven't turned the camera on (p. 6, 14).
- You haven't loaded a cassette (p. 12).
- The battery pack is exhausted, or not properly attached (p. 9).
- You have selected the Easy Recording program (p. 31).
- An eye-controlled switch (p. 60) or one of the menus (p. 22) is displayed in the viewfinder.
- The tape has reached the end (p. 12).

❑ The camera turned itself off.

- You left it in record pause mode for more than about five minutes (p. 6).
- The battery pack is exhausted (p. 9).

❑ There's no picture in the viewfinder.

- You haven't taken off the lens cap (p. 13).
- You haven't selected a recording program (p. 31).
- The STANDBY cover is closed (p. 6).

❑ The camera doesn't remember the date and time (or other settings) when it's turned off.

- You haven't installed the backup battery (p. 11).

2 The camera won't focus.

- The viewfinder lens needs adjusting (p. 13).
- The lens is dirty (p. 69).
- Autofocus (or eye-controlled focus) is turned off (p. 34, 58).
- Eye-controlled focus is not set properly (p. 58).
- Some subjects are not suitable for autofocus. In the following situations, you will often get better results using manual focus (p. 34).



Rapidly moving subjects



Several subjects in the viewfinder at different distances



Subjects with horizontal stripes



Subjects without much contrast (such as a white wall)



Subjects behind glass



Slanted subjects



Subjects which reflect too much light (such as shiny car exteriors)



Dark subjects



Night scenes

2 The wireless controller doesn't work.

- The remote sensor is turned off (p. 23).
- The batteries are exhausted (p. 23).

2 The tally lamp doesn't flash.

- It is turned off (p. 29).

2 The digital functions (zoom, effects or fader) don't work.

- You can only use one type of digital function at a time. Make sure the DIGITAL switch is set properly (p. 20, 38, 40).
- Digital effects and fader functions cannot be used if you have selected the Easy Recording program (p. 31).

2 The PLAY ► button doesn't work.

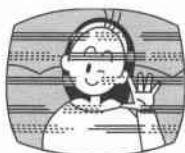
- The program selector isn't set to **PLAY** (p. 14).
- You haven't loaded a cassette (p. 12).
- The tape has reached the end (p. 12).

2 There's a bright stripe on the screen.



- When you are recording in dark places, a bright light in the scene may cause a vertical bar, called smear, to appear on the screen.

2 The playback picture is rough.



- If your recordings do not play back smoothly, clean the video heads (p. 69).

2 There's no picture on the TV screen, even though the tape is moving.

- The video heads need cleaning (p. 69).
- The TV/VIDEO selector on the TV isn't set to VIDEO (p. 17).
- If the camera is connected using the RF unit, you haven't selected the video channel (p. 19).

2 Eye Control doesn't work.

- You haven't set the EYE CONTROL switch (p. 56).
- You haven't calibrated the camera (see p. 56 and below).
- Conditions have changed between calibrating the camera and using Eye Control. If there is a change in lighting conditions (if you go outside, for example) you should calibrate the camera again, without canceling the previous calibrations. However, a major change (such as putting on glasses) means that you should first cancel the previous calibrations by pressing the C. RESET button, as described on p. 57.
- More than one person has been using the same Eye Control number (p. 56). Calibrate the camera again, and cancel the previous calibrations.

- If the Eye Control frame does not appear in the viewfinder, it has been hidden (p. 59).
- If the eye-controlled switches do not appear in the viewfinder, they have been turned off (p. 61).

2 I can't calibrate the camera

- You didn't keep your eye to the viewfinder during calibration.
- You moved the camera, or didn't hold it straight.
- You blinked, moved your eyes suddenly or didn't look straight into the viewfinder.
- The sun was shining in your eyes.
- Your hair was in your eyes.
- You were wearing mirrored or multi-coated glasses, or your glasses weren't on straight.

2 There are air bubbles inside the lens.

- This is unlikely, but may happen if you use the camera in places where the air pressure is very low, in an airplane for example. The bubbles will disappear a week or so after you return the camera to normal atmospheric pressure.

2 Malfunction

- External interference may cause the camera's microprocessor to malfunction temporarily. If random letters appear in the viewfinder or if normal operation is interrupted, remove and then replace the power source (and if necessary, the backup battery).

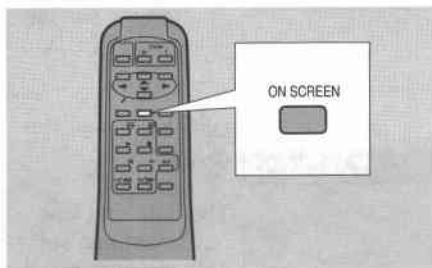
- ❓ **The Editing function does not work, or**
- ❓ **I tried to set my camera to control my VCR remotely, but I cannot find the right setting. (p. 46)**
 - Move the cables and the strap, and everything else out of the way of the infra-red remote control signals to VCR. (p. 45)
 - Move the camera so it is in the right position to send signals to the VCR's sensor. (p. 45)
- ❓ **The PREVIEW function of the Auto Editing Function looks very strange.**
 - To help with editing, playback in the preview function starts a little before each 'cut-in' point. It pauses for 2 seconds at the cut-in point itself. It also pauses again at the 'cut-out' point. (p. 49)
- ❓ **The scenes in the final tape recorded to the VCR start and stop in odd places.**
 - Check that the "cut-in" and "cut-out" points are correctly set. (p. 50)
- ❓ **The Auto Editing Function does not work at all.**
 - Check that you have set it correctly to remotely control your VCR. (p. 45, 46)

About the LCD Viewfinder

Liquid Crystal Viewfinders use extremely high-precision technology, but there will be pixels which do not light up or which are continuously lit. This is not an error and will not affect the recording.

Viewfinder Displays

E



To display the date and time on a connected TV, press the DATE button. Press the TITLE button to see the title. These displays are recorded just as they appear on the screen.

Press the wireless controller's ON SCREEN button to see the other viewfinder displays on the TV screen. (The displays appear white on-screen.) They will not be added to any recordings you make with the camera.



indicates a flashing display.

PAUSE Record pause mode (p. 6)

REC Recording (p. 6)

The backup battery is not properly installed, or needs replacing (p. 11).

Shows how much battery power remains (p. 10).

The battery pack is exhausted (p. 10).

No cassette is loaded, or it is set for erasure prevention (p. 12).

END ...finally, it tells you when you have completely run out of tape.

Hi8 Hi8 recording or playback (p. 16)

EJECT The camera is ejecting the tape (p. 12).

EJECT The safety mechanism is activated. Unload the cassette and turn the camera off. Turn it on again and reload the cassette.

STOP Playback is stopped (p. 14).

▶ Normal playback (p. 14)

▶▶ Fast forward (p. 14)

◀◀ Rewind (p. 14)

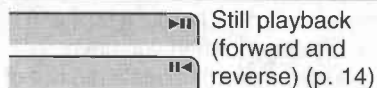
▶▶ Tape return (forward and reverse) (p. 16)

▶▶ Fast forward playback (p. 14)

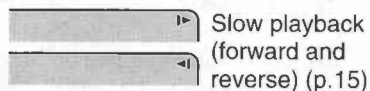
◀◀ Rewind playback (p. 15)

▶▶ Frame advance playback (p. 15)

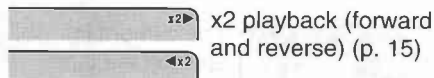
◀◀ Frame reverse playback (p. 15)



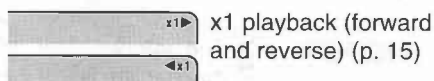
Still playback
(forward and
reverse) (p. 14)



Slow playback
(forward and
reverse) (p. 15)

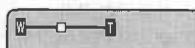


x2 playback (forward
and reverse) (p. 15)



x1 playback (forward
and reverse) (p. 15)

Zoom display (p. 20):



Optical zoom



Optical plus digital
zoom



Zoom in



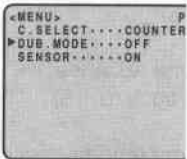
Zoom out



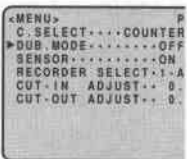
The image stabilizer
is turned on (p. 21).



Camera menu
(p. 22)



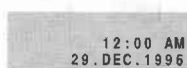
Playback menu
(p. 22)



Edit menu
(p. 22)



The remote sensor
is turned off (p. 23).



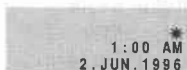
Date and time
(p. 24)



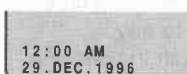
The date and time
have not been set.
This display will not
be recorded (p. 24).



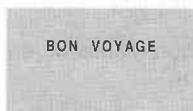
World clock (p. 26).



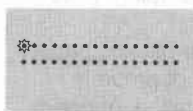
Summer time
(p. 26)



Data code (p. 42)



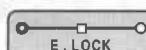
Title (p. 27)



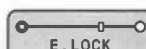
Appears when you
are writing a title
(p. 27).



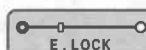
Recording programs
(p. 31).



Manual exposure display (p. 33):
Exposure locked



Brighter than standard exposure level



Darker than standard exposure level



Manual focus is selected (p. 34).



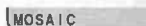
White balance is set manually (p. 35).



Manually selected shutter speed (1/1000th of a second in this example) (p. 36)



Digital effects: the display flashes when the effect is being selected, and appears steadily when it is activated (p. 37).



No digital effect is selected (p. 37).



Digital fader functions. The display flashes when the function is being selected and appears steadily when it is activated (p. 39).



No fader function is selected (p. 40).



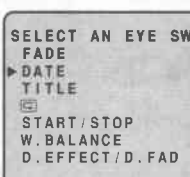
The wind screen is turned off (p. 41).



Eye Control calibration: the display appears when the program selector is set to CAL (p. 56).



Eye Control frame (p. 58)



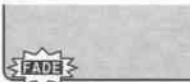
List of eye-controlled switches (p. 60)



The eye-controlled switch is being operated (p. 58).



AUTO or SET appears next to the eye-controlled white balance switch (p. 60).



The eye-controlled switch is being operated (p. 60).

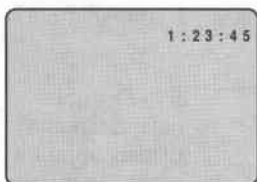


Frame lock, with the eye-controlled switches turned off (p. 61)



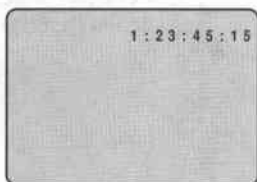
Condensation warning (p. 70)

Tape counter



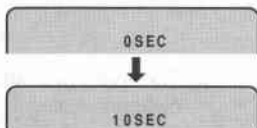
The tape counter indicates the approximate running time of the tape — 1 hour, 23 minutes and 45 seconds in this example. The tape counter is reset when a cassette is loaded, or when you press the C. RESET button (p. 16).

RC Time Code

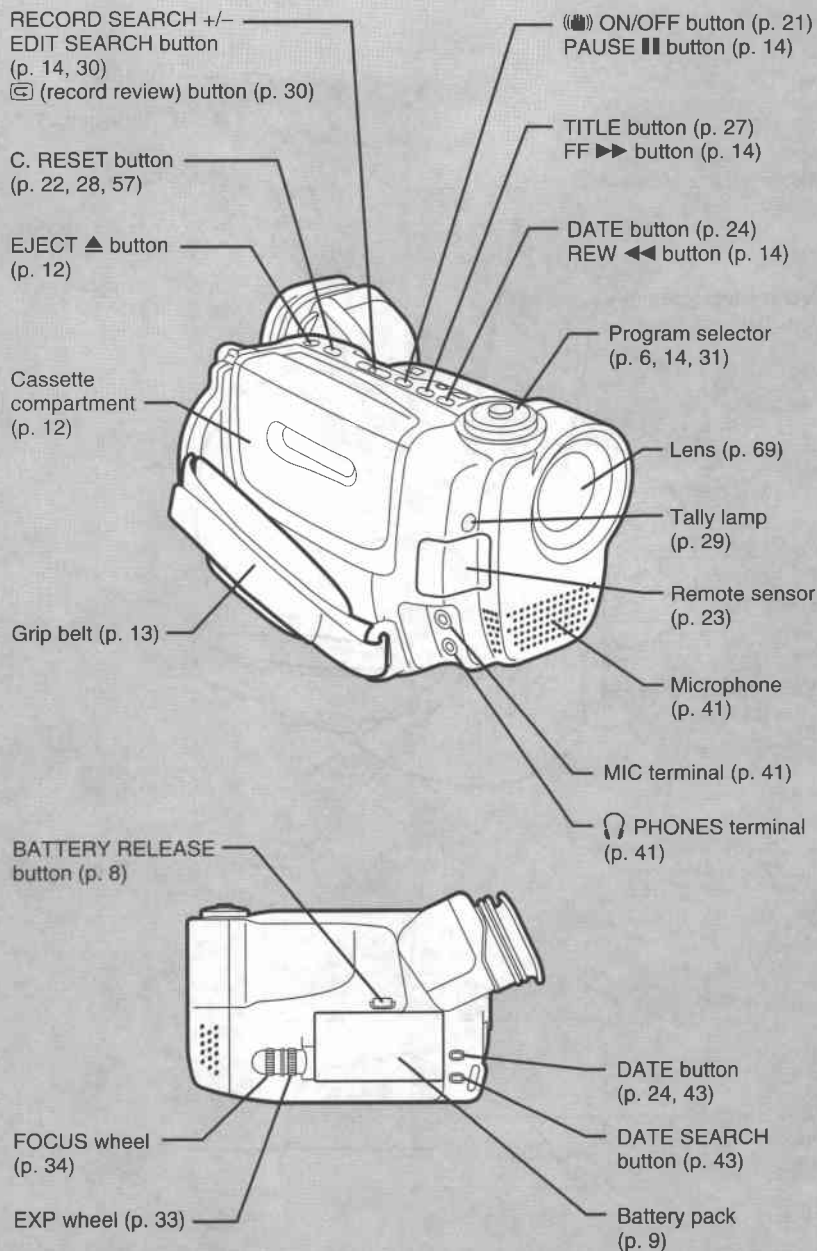


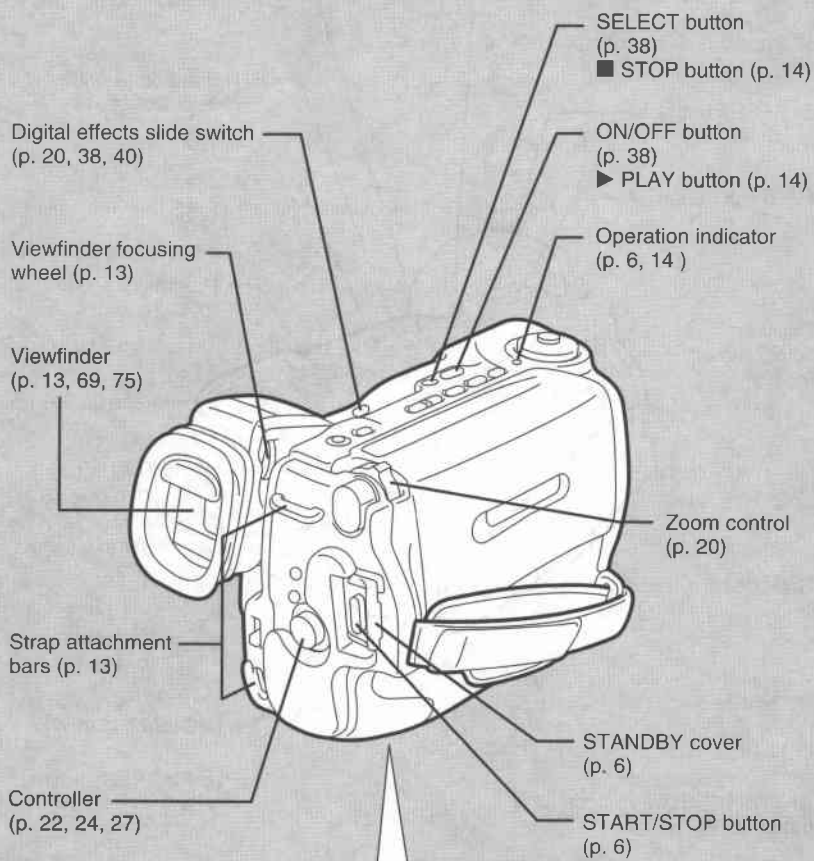
This records counter information, including hour, minute, second, and frame number on a special data code area on the tape itself. Is reset automatically when a new tape is loaded.

Recording reminder



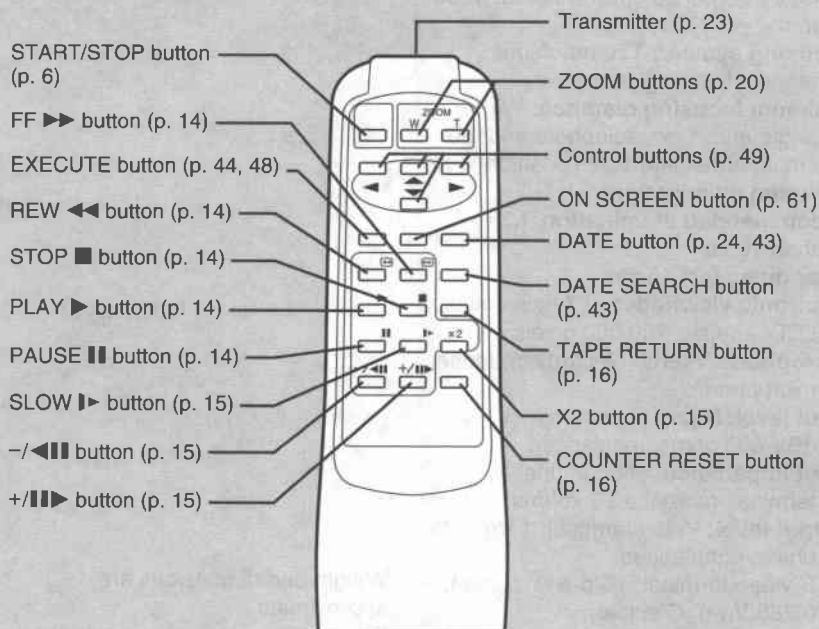
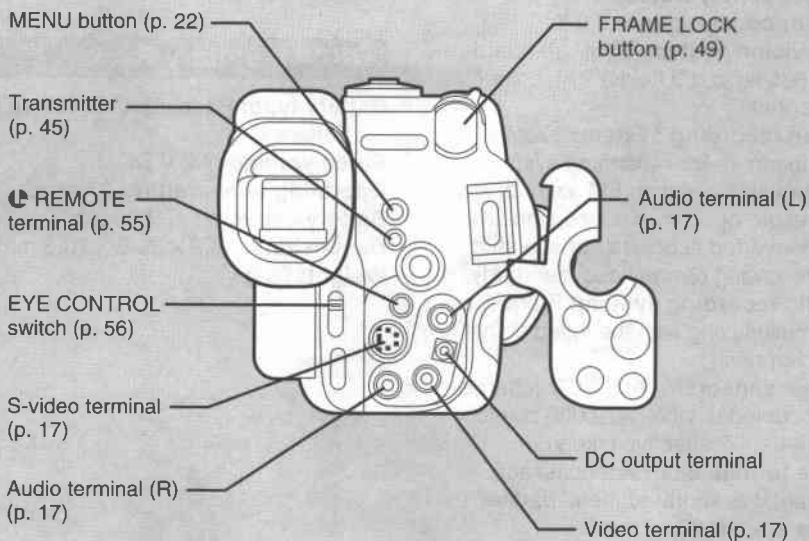
When you start recording, the camera counts from 0SEC to 10SEC. Shots which are shorter than 10 seconds may be difficult to edit later. On the other hand, if you are not planning to edit the recording, remember that a shot which does not contain action should generally last no longer than 10 seconds.





Tripod socket
(p. 62)

Backup battery
holder (p. 10)



Specifications

E

UC-X30Hi

Power supply (rated): 7.2 V DC

Power consumption: 6.0 W

Television system: CCIR standard
(625 lines, 50 fields) PAL colour
signal

Video recording system: 2 rotary
heads, helical scanning system;
luminance signal: FM azimuth
recording; chrominance signal:
converted subcarrier phase shift
recording (8mm video standard)

Audio recording system: Frequency
multiplexing with the video signal (2
channels)

Image sensor: 1/4-inch CCD (charge-
coupled device), 470,000 pixels
(440,000 effective pixels)

Tape format: 8mm videocassette,
metal evaporated/metal particle

Tape speed: 20.05 mm/s

Fast forward/rewind time: Approx. 6
minutes (with a P5-90 cassette)

Lens: f/1.6–3.6, 20× power zoom, 4–80
mm

Focusing system: TTL autofocus,
manual focusing possible

Minimum focusing distance: Wide-
angle end: 1 cm; telephoto end: 80
cm; intermediate zoom position: 1 m

Minimum illumination: 3 lx

Recommended illumination: More
than 100 lx

Filter diameter: 46 mm

Electronic viewfinder: 0.7-inch colour
LCD; approx. 180,000 pixels

Microphone: Stereo electret condenser
microphone

Input level: Microphone terminal: –67
dBV/600 ohms unbalanced

Input impedance: Microphone
terminal: more than 5 kohms

Output level: Video terminal: 1 Vp-p/75
ohms, unbalanced;
S-video terminal: 1 Vp-p (Y signal),
0.286 Vp-p (C signal);
audio terminals: –10 dBV, less than
3 kohms, unbalanced

Operating temperature: 0°–40°C

Dimensions: 106 × 109 × 184 mm

Weight: 800 g

BP-911 Battery Pack

Battery type: Rechargeable lithium ion
battery

Rated voltage: 7.2 V DC

Operating temperature: 0°–40°C

Battery capacity: 1,150 mAh

Dimensions: 38.2 × 20.5 × 70.5 mm

Weight: 96 g

Weight and dimensions are
approximate.
Errors and omissions excepted.
Subject to change without notice.

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[illegible]

This image shows a full page of handwriting practice paper. It features multiple sets of horizontal dashed lines spaced evenly down the page, providing a guide for letter height and placement. The background is white, and there are no other markings or text present.

1915

1915

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